FUJITSU

FUJITSU Server
PRIMEQUEST 2000 Series
Installation Manual

CA92344-0536-01

Preface

This manual describes the functions and this manual describes how to set up this product, including the steps for installation of the PRIMEQUEST 2000 series server, initialization, and software installation. The manual is intended for system administrators.
For details on the regulatory compliance statements and safety precautions, see the *PRIMEQUEST 2000 Series Safety and Regulatory Information* (CA92344-0523).

Organization of this manual

This manual is organized as follows.

CHAPTER 1 Installation Overview

Chapter 1 describes the workflow up to actual operation of the PRIMEQUEST 2000 series server

CHAPTER 2 Preparing for Main Unit Installation

Chapter 2 describes the preparation before main unit installation. This preparation includes work up to power cable connection.

CHAPTER 3 Work before Operating System Installation

Chapter 3 describes the work that must be done before you install an operating system on the PRIMEQUEST 2000 series server. The chapter also describes settings for actual operation and various setup works.

CHAPTER 4 Installation of Operating System and bundled software

Chapter 4 describes how to install the operating system and bundled software.

Chapter 5 describes how to make various necessary settings after operating system.

CHAPTER 6Work after installation

Chapter 6 describes the work performed after PRIMEQUEST 2000 series installation. This work includes configuring NTP and security.

CHAPTER 7Power ON and OFF of the partition

Chapter 7 describes partition power control.

Appendix A List of setting items

Appendix A provides links to Appendix A List of Settings in the *PRIMEQUEST 2000 Series Tool Reference* (CA92344-0539)

Appendix B About software

Appendix B provides a link to 3.3 Bundled Software in the *PRIMEQUEST 2000 Series General Description* (CA92344-0534).

Appendix C Configuring the SAN boot environment

Appendix C is a link to the *PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual* (C122-E206EN).

Appendix D **Notes** on VMware installation

Appendix D describes the procedure for installing an internal hard disk in a RAID environment in VMware vSphere and provides notes on installation

Appendix E Setting up the NTP Server (Windows)

Appendix E describes how to specify and set of an NTP server for a specific Windows operating system

Revision History

Edition	Date	Revised location (type)	Description
1	2014-08-12	All pages	- The edition is initialized to "01" for changing manual code - Added descriptions about Extended Partitioning function

Product operating environment

This product is a computer intended for use in a computer room environment. For details on the product operating environment, see the following manual:
PRIMEQUEST 2000 Series Hardware Installation Manual (CA92344-0535)

Safety Precautions

Alert messages

This manual uses the following alert messages to prevent users and bystanders from being injured and to prevent property damage.

This indicates a hazardous (potentially dangerous) situation that is likely to result in death or serious personal injury if the user does not perform the procedure correctly.

This indicates a hazardous situation that could result in minor or moderate personal injury if the user does not perform the procedure correctly. This also indicates that damage to the product or other property may occur if the user does not perform the procedure correctly.

This indicates information that could help the user use the product more efficiently.

Alert messages in the text

An alert statement follows an alert symbol. An alert statement is indented on both ends to distinguish it from regular text. Similarly, one space line is inserted before and after the alert statement.

Only Fujitsu certified service engineers should perform the following tasks on this product and the options provided by Fujitsu. Customers must not perform these tasks under any circumstances. Otherwise, electric shock, injury, or fire may result.

- Newly installing or moving equipment
- Removing the front, rear, and side covers
- Installing and removing built-in options
- Connecting and disconnecting external interface cables
- Maintenance (repair and periodic diagnosis and maintenance)

The List of important alert items table lists important alert items.

List of important alert items

This manual does not contain important alert items.

⚠WARNING

This indicates a hazardous (potentially dangerous) situation that is likely to result in death or serious personal injury if the user does not perform the procedure correctly.

Work Category	Warning	Location
Setup	Field engineers perform the following tasks on this product. Customers must not perform these tasks under any circumstances. Otherwise, electric shock, injury, or fire may result. - Newly installing or moving equipment - Removing the front, rear, and side covers - Installing and removing built-in options - Connecting and disconnecting external interface cables - - Maintenance (repair and periodic diagnosis and maintenance)	1.1 Setup Workflow

⚠CAUTION

This indicates a hazardous situation that could result in minor or moderate personal injury if the user does not perform the procedure correctly. This also indicates that damage to the product or other property may occur if the user does not perform the procedure correctly.

Work Category	Warning	Location
Normal operation	The unit may be damaged or operating abnormally. - Follow the precautions, warnings, and instructions shown on the main unit. - Do not block the vent holes. - Do not install the main unit in a location exposed to direct sunlight or close to a device that may generate large amounts of heat. - Do not install the main unit in a location exposed to large amounts of dust, corrosive gas, or salt spray. - Do not install the main unit in a location subject to strong vibration. Install the main unit on a flat surface. - Use grounded Category 3 wiring or better. Using another type of grounded wiring may cause abnormal operation. - Do not route cables under the main unit. Do not allow cables to become taut. - Do not disconnect the power cables while the main unit power is on. - If it is hard to push the connector latch of a LAN cable or other cable when attempting to disconnect the cable, push it with a flathead screwdriver. Forcibly inserting a finger may cause personal injury or damage the unit. - Do not place anything on top of the main unit. Do not work above or on top of	2.1Safety Precautions

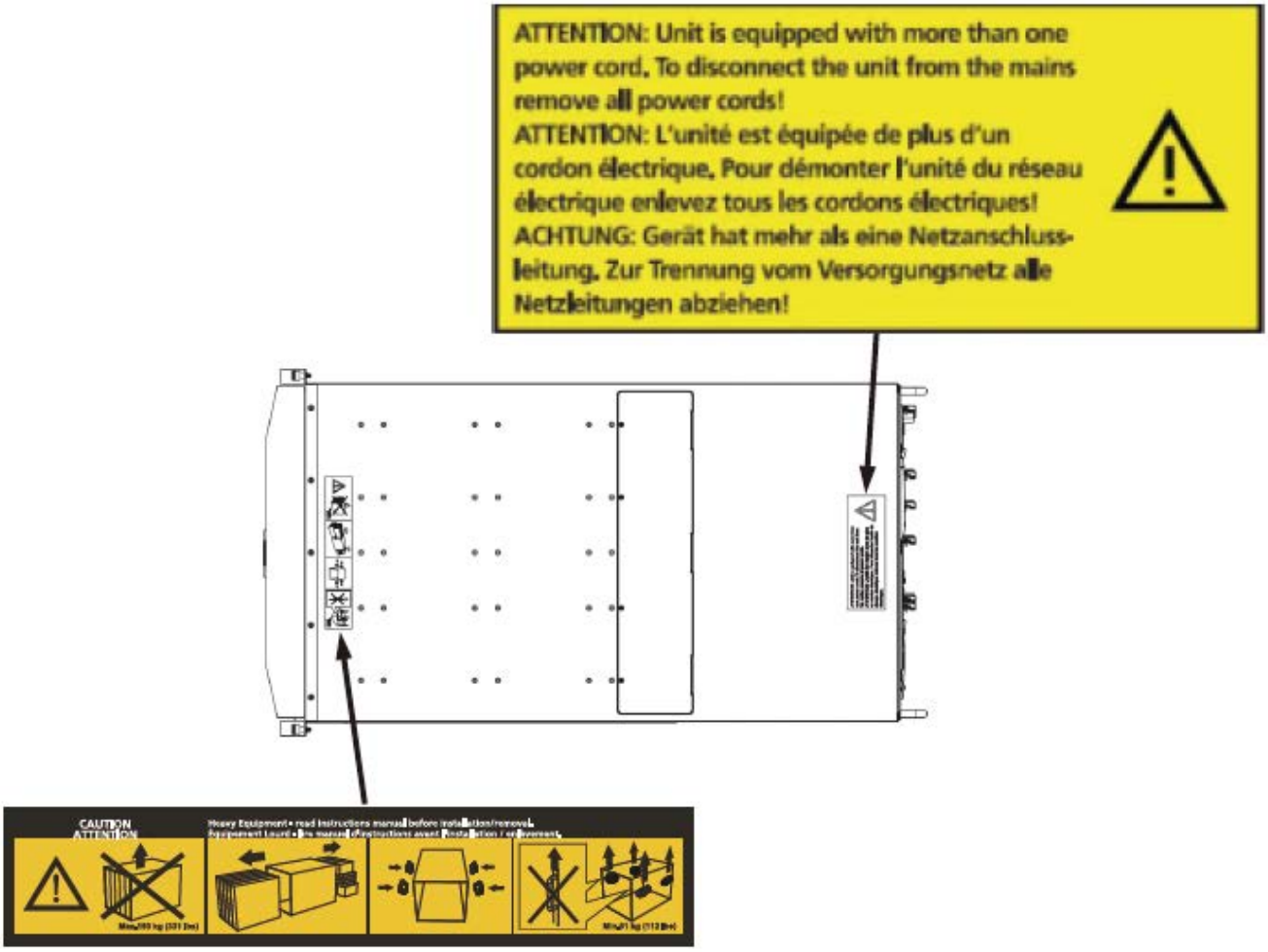
	the main unit. - Prevent rapid rises in the ambient temperature during winter. Such an abrupt temperature change may cause condensation to form in the main unit. Allow sufficient warm-up time before starting operation. - Do not install the main unit close to a photocopier, air-conditioning unit, welder, or other device that generates electromagnetic noise. - Do not install the main unit close to a device that generates large amounts of electrical noise. - Do not connect the main unit to the same power supply line as an elevator in the facility or other equipment that would expose it to sudden voltage drops. - Implement antistatic measures at the installation site. - Confirm that the power supply voltage and frequency are adequate according to the respective ratings shown on the main unit. - Do not insert or drop foreign matter into the openings of the main unit. The main unit contains high-voltage components. If any metallic matter or other electro-conductive object enters the main unit through an opening, it may cause a short circuit. This may lead to fire, electric shock, or damage to the main unit. - For details on maintenance of the main unit, contact the distributor where you purchased your product, or your sales representative.	
Normal operation	(Ignition) When over current is detected and the power is cut off by tripping the breaker of the AC power or optional power distribution box, there is a possibility that failure, such as short circuit occurring in the main unit. In such case, contact to your sales representative or field engineer without turning on the power supply again.	3.2.1 Power-on/off of main unit
Normal operation	(Damage to data) Confirm that the System Power LED of the OPL is off before turning off the main power. If you turn off the main power while the System Power LED of the OPL is on, data may be damaged.	3.2.1 Power-on/off of main unit
Normal operation	(Damage to data) Confirm that selection of disk is right, when choosing a dumping device. If selection is mistaken, data may be damaged.	5.3 Setting of sadump

Warning labels

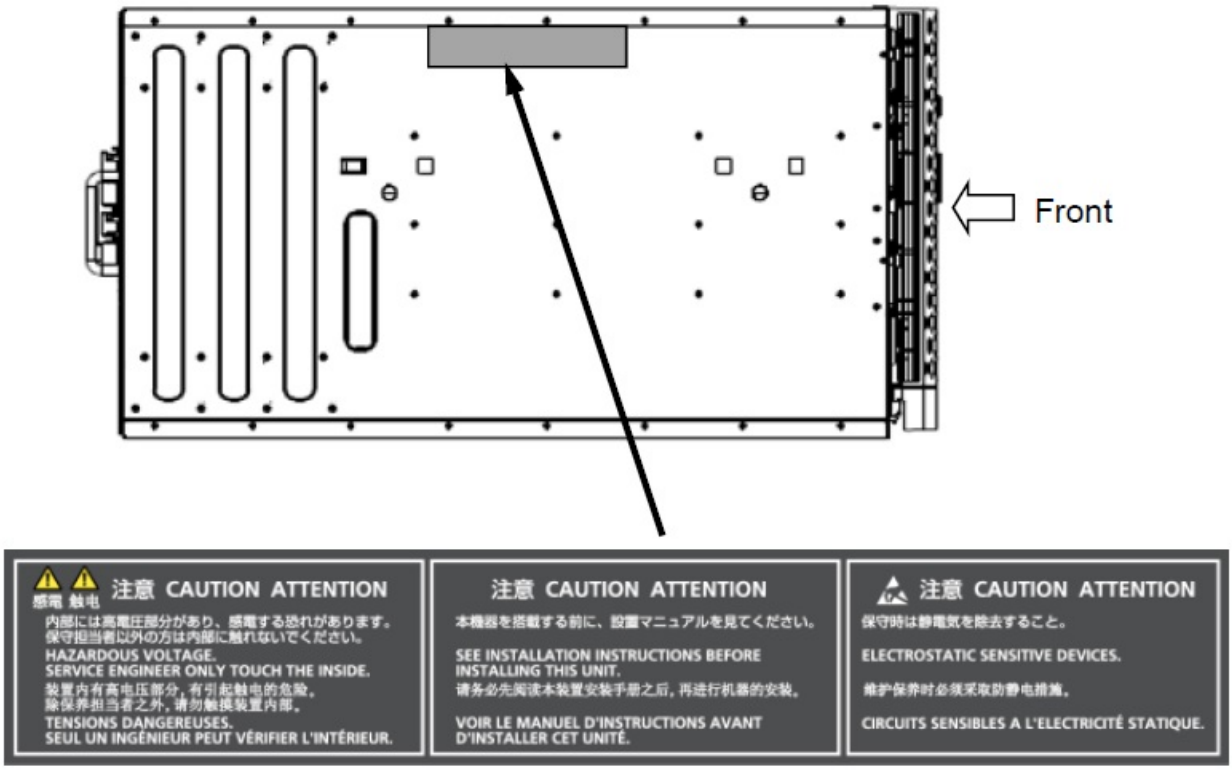
CAUTION

Never remove the warning labels.

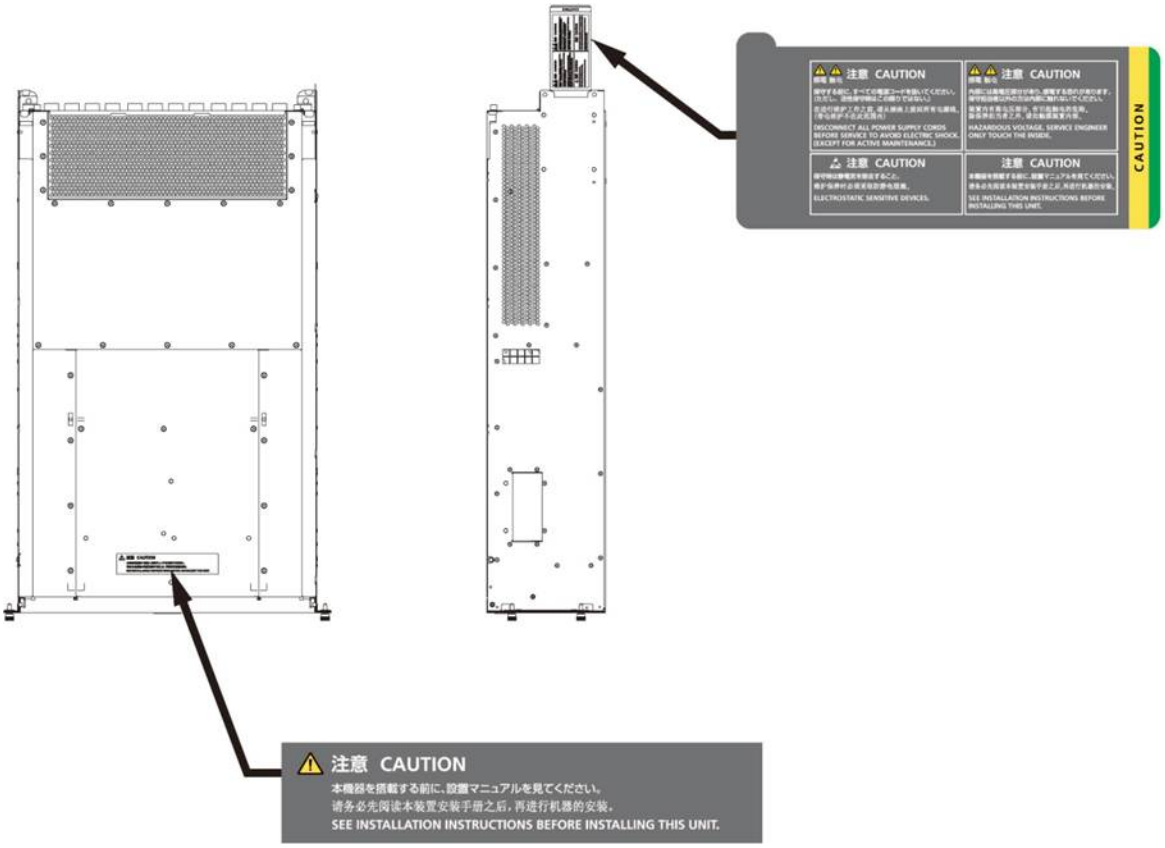
Warning label location (the main cabinet top)


ATTENTION: Unit is equipped with more than one power cord. To disconnect the unit from the mains remove all power cords!
ATTENTION: L'unité est équipée de plus d'un cordon électrique. Pour démonter l'unité du réseau électrique enlevez tous les cordons électriques!
ACHTUNG: Gerät hat mehr als eine Netzanschluss-leitung. Zur Trennung vom Versorgungsnetz alle Netzleitungen abziehen!
CAUTION
ATTENTION

Warning label location (the main cabinet left)



Warning label location (PCI_Box)



Notes on Handling the Product

About this product

This product is designed and manufactured for standard applications. Such applications include, but are not limited to, general office work, personal and home use, and general industrial use. The product is not intended for applications that require extremely high levels of safety to be guaranteed (referred to below as "safety-critical" applications). Use of the product for a safety-critical application may present a significant risk of personal injury and/or death. Such applications include, but are not limited to, nuclear reactor control, aircraft flight control, air traffic control, mass transit control, medical life support, and missile launch control. Customers shall not use the product for a safety-critical application without guaranteeing the required level of safety. Customers who plan to use the product in a safety-critical system are requested to consult the Fujitsu sales representatives in charge.

Storage of accessories

Keep the accessories in a safe place because they are required for server operation.

Adding optional products

For stable operation of the PRIMEQUEST 2000 series server, use only a Fujitsu-certified optional product as an added option.

Note that the PRIMEQUEST 2000 series server is not guaranteed to operate with any optional product not certified by Fujitsu.

Exportation/release of this product

Exportation/release of this product may require necessary procedures in accordance with the regulations of the Foreign Exchange and Foreign Trade Control Law of Japan and/or US export control laws.

Maintenance

Only Fujitsu certified service engineers should perform the following tasks on this product and the options provided by Fujitsu. Customers must not perform these tasks under any circumstances. Otherwise, electric shock, injury, or fire may result.

- Newly installing or moving equipment
- Removing the front, rear, and side covers
- Installing and removing built-in options
- Connecting and disconnecting external interface cables
- Maintenance (repair and periodic diagnosis and maintenance)

Only Fujitsu certified service engineers should perform the following tasks on this product and the options provided by Fujitsu. Customers must not perform these tasks under any circumstances. Otherwise, product failure may result. PRIMEQUEST 2000 Series General Description

- Unpacking an optional Fujitsu product, such as an optional adapter, delivered to the customer

Modifying or recycling the product

Modifying this product or recycling a secondhand product by overhauling it without prior approval may result in personal injury to users and/or bystanders or damage to the product and/or other property.

Note on erasing data from hard disks when disposing of the product or transferring it

Disposing of this product or transferring it as is may enable third parties to access the data on the hard disk and use it for unforeseen purposes. To prevent the leakage of confidential information and important data, all of the data on the hard disk must be erased before disposal or transfer of the product.

However, it can be difficult to completely erase all of the data from the hard disk. Simply initializing (reformatting) the hard disk or deleting files on the operating system is insufficient to erase the data, even though the data appears at a glance to have been erased. This type of operation only makes it impossible to access the data from the operating system. Malicious third parties can restore this data.

If you save your confidential information or other important data on the hard disk, you should completely erase the data, instead of simply carrying out the aforementioned operation, to prevent the data from being restored. To prevent important data on the hard disk from being leaked when the product is disposed of or transferred, you will need to take care to erase all the data recorded on the hard disk on your own responsibility.

Furthermore, if a software license agreement restricts the transfer of the software (operating system and application software) on the hard disk in the server or other product to a third party, transferring the product without deleting the software from the hard disk may violate the agreement. Adequate verification from this point of view is also necessary.

Product and service inquiries

For all product use and technical inquiries, contact the distributor where you purchased your product, or a Fujitsu sales representative or systems engineer (SE). If you do not know the appropriate contact address for inquiries about the PRIMEQUEST 2000 series, use the Fujitsu contact line.

Fujitsu contact line

We accept Web inquiries. For details, visit our website:
https://www-s.fujitsu.com/global/contact/computing/PRMQST_feedback.html

Warranty

If a component failure occurs during the warranty period, we will repair it free of charge in accordance with the terms of the warranty agreement. For details, see the warranty.

Before requesting a repair

If a problem occurs with the product, confirm the problem by referring to 11.2 Troubleshooting in the *PRIMEQUEST 2000 Series Administration Manual* (CA92344-0537). If the error recurs, contact your sales representative or a field engineer.

Confirm the model name and serial number shown on the label affixed to the right front of the device and report it. Also check any other required items beforehand according to 11.2 Troubleshooting in the *PRIMEQUEST 2000 Series Administration Manual* (CA92344-0537).

The system settings saved by the customer will be used during maintenance.

Manual

How to use this manual

This manual contains important information about the safe use of this product. Read the manual thoroughly to understand the information in it before using this product. Be sure to keep this manual in a safe and convenient location for quick reference.

Fujitsu makes every effort to prevent users and bystanders from being injured and to prevent property damage. Be sure to use the product according to the instructions in this manual.

Exportation/release of this document may require necessary procedures in accordance with the regulations of the Foreign Exchange and Foreign Trade Control Law of Japan and/or US export control laws.

Manuals for the PRIMEQUEST 2000 series

The following manuals have been prepared to provide you with the information necessary to use the PRIMEQUEST 2000 series.

You can access HTML versions of these manuals at the following sites:

Japanese-language site: http://jp.fujitsu.com/platform/server/primequest/manual/2000/

Global site: http://www.fujitsu.com/global/services/computing/server/primequest/

http://manuals.ts.fujitsu.com/

Title	Description	Manual code
PRIMEQUEST 2000 Series Getting Started Guide	Describes what manuals you should read and how to access important information after unpacking the PRIMEQUEST 2000 series server. (This manual comes with the product.)	CA92344-0522
PRIMEQUEST 2000 Series Safety and Regulatory Information	Contains important information required for using the PRIMEQUEST 2000 series safely.	CA92344-0533
PRIMEQUEST 2000 Series General Description	Describes the functions and features of the PRIMEQUEST 2000 series.	CA92344-0534
SPARC Enterprise/ PRIMEQUEST Common Installation Planning Manual	Provides the necessary information and concepts you should understand for installation and facility planning for SPARC Enterprise and PRIMEQUEST installations.	C120-H007EN
PRIMEQUEST 2000 Series Hardware Installation Manual	Includes the specifications of and the installation location requirements for the PRIMEQUEST 2000 series.	CA92344-0535
PRIMEQUEST 2000 Series Installation Manual	Describes how to set up the PRIMEQUEST 2000 series server, including the steps for installation preparation, initialization, and software installation.	CA92344-0536
PRIMEQUEST 2000 Series User Interface Operating Instructions	Describes how to use the Web-UI and UEFI to assure proper operation of the PRIMEQUEST 2000 series server.	CA92344-0538
PRIMEQUEST 2000 Series Administration Manual	Describes how to use tools and software for system administration and how to maintain the system (component replacement and error notification).	CA92344-0537
PRIMEQUEST 2000 Series Tool Reference	Provides information on operation methods and settings, including details on the MMB and UEFI functions.	CA92344-0539
PRIMEQUEST 2000 Series Message Reference	Lists the messages that may be displayed when a problem occurs during operation and describes how to respond to them.	CA92344-0540

Title	Description	Manual code
PRIMEQUEST 2000 Series REMCS Installation Manual	Describes REMCS service installation and operation	CA92344-0542
PRIMEQUEST 2000 Series Glossary	Defines the PRIMEQUEST 2000 series related terms and abbreviations.	CA92344-0541

Related manuals

The following manuals relate to the PRIMEQUEST 2000 series.

You can access these manuals at the following site:

http://www.fujitsu.com/global/services/computing/server/primequest/

http://manuals.ts.fujitsu.com/

Contact your sales representative for inquiries about the ServerView manuals

Title	Description	Manual code
ServerView Suite ServerView Operations Manager Quick Installation (Windows)	Describes how to install and start ServerView Operations Manager in a Windows environment.	None
ServerView Suite ServerView Operations Manager Quick Installation (Linux)	Describes how to install and start ServerView Operations Manager in a Linux environment.	None
ServerView Suite ServerView Installation Manager	Describes the installation procedure using ServerView Installation Manager.	None
ServerView Suite ServerView Operations Manager Server Management	Provides an overview of server monitoring using ServerView Operations Manager, and describes the user interface of ServerView Operations Manager.	None
ServerView Suite ServerView RAID Management User Manual	Describes RAID management using ServerView RAID Manager.	None
ServerView Suite Basic Concepts	Describes basic concepts about ServerView Suite.	None
ServerView Operations Manager Installation ServerView Agents for Linux	Describes installation and update installation of ServerView Linux Agent.	None
ServerView Operations Manager Installation ServerView Agents for Windows	Describes installation and update installation of ServerView Windows Agent.	None
ServerView Mission Critical Option User Manual	Describes the necessary functions unique to PRIMEQUEST (cluster linkage) and ServerView Mission Critical Option (SVmco), which is required for supporting these functions.	None
ServerView RAID Manager VMware vSphere ESXi 5 Installation Guide	Describes the installation and settings required to use ServerView RAID Manager on the VMware vSphere ESXi 5 server.	None

Title	Description	Manual code
MegaRAID SAS Software	Provides technical information on using RAID controllers. Refer to the manual from the SVS-ServerView Suite ServerBooks DVD(Manual)2 supplied with the product or from the following URL: The Fujitsu Technology Solutions manuals server http://manuals.ts.fujitsu.com/	None
MegaRAID SAS Device Driver Installation	Provides technical information on using RAID controllers. Refer to the manual from the SVS-ServerView Suite ServerBooks DVD(Manual)2 supplied with the product or from the following URL: The Fujitsu Technology Solutions manuals server http://manuals.ts.fujitsu.com/	None
Modular RAID Controller Installation Guide	Provides technical information on using RAID controllers. Refer to the manual from the SVS-ServerView Suite ServerBooks DVD(Manual)2 supplied with the product or from the following URL: The Fujitsu Technology Solutions manuals server http://manuals.ts.fujitsu.com/	None

Abbreviations

This manual uses the following product name abbreviations.

Formal product name	Abbreviation
Microsoft ® Windows Server ® 2012 R2 Standard	Windows, Windows Server 2012
Microsoft ® Windows Server ® 2012 R2 Datacenter	
Microsoft ® Windows Server ® 2012 Standard	
Microsoft ® Windows Server ® 2012 Datacenter	
Microsoft ® Windows Server ® 2008 R2 Standard	Windows, Windows Server 2008
Microsoft ® Windows Server ® 2008 R2 Enterprise	
Microsoft ® Windows Server ® 2008 R2 Datacenter	
Red Hat ® Enterprise Linux ® 6 (for Intel64)	Linux, RHEL6, RHEL
Novell (R) SUSE(R) LINUX Enterprise Server 11 Service Pack 3	SLES11 SP3
Oracle Linux 6 (x86_64)	Oracle Linux, Oracle Linux 6
VMware vSphere (R) 5	VMware, vSphere 5.x, VMware 5, VMware 5.x
VMware (R) ESXi (TM) 5	ESXi, ESXi 5, ESXi 5.x

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- Linux is a registered trademark of Linus Torvalds.
- Red Hat, the Shadowman logo and JBoss are registered trademarks of Red Hat, Inc. in the U.S. and other countries.
- Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Atom, Intel Atom Inside, Intel Core, Core Inside, Intel vPro, vPro Inside, Celeron, Celeron Inside, Itanium, Itanium Inside, Pentium, Pentium Inside, Xeon, Xeon Phi, Xeon Inside,

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- Ethernet is a registered trademark of Fuji Xerox Co., Ltd. in Japan and is a registered trademark of Xerox Corp. in the United States and other countries.
- VMware is a trademark or registered trademark of VMware, Inc. in the United States and other countries.
- Novell and SUSE Linux Enterprise Server are trademarks of Novell, Inc.
- Xen is a trademark or registered trademark of Citrix Systems, Inc. or its subsidiaries in the United States and other countries.
- Other company names and product names are the trademarks or registered trademarks of their respective owners.
- Trademark indications are omitted for some system and product names in this manual.

Notation

This manual uses the following fonts and symbols to express specific types of information.

Font or symbols	Meaning	Example
Italics	Title of a manual that you should refer to	See the *PRIMEQUEST 2000 Series Installation Manual* (CA92344-0536).
[ ]	Window names as well as the names of buttons, tabs, and drop-down menus in windows are enclosed in brackets.	Click the [OK] button.

Notation for the CLI (command line interface)

The following notation is used for commands.

Command syntax

Command syntax is represented as follows.

- Variables requiring the entry of a value are enclosed in angle brackets < >
- Optional elements are enclosed in brackets [ ].
- Options for optional keywords are grouped in | (stroke) separated lists enclosed in brackets [ ].
- Options for required keywords are grouped in | (stroke) separated lists enclosed in braces { }.

Command syntax is written in a box.

Remarks

The command output shown in the PDF manuals may include line feeds at places where there is no line feed symbol (¥ at the end of the line).

Notes on notations

- If you have a comment or request regarding this manual, or if you find any part of this manual unclear, please take a moment to share it with us by filling in the form at the following webpage, stating your points specifically, and sending the form to us:
  https://www-s.fujitsu.com/global/contact/computing/PRMQST_feedback.html
- The contents of this manual may be revised without prior notice.
- In this manual, the Management Board and MMB firmware are abbreviated as "MMB."
- In this manual, IOU_10GbE and IOU_1GbE are collectively referred to as IO Units.
- Screenshots contained in this manual may differ from the actual product screen displays.
- The IP addresses, configuration information, and other such information contained in this manual are display

examples and differ from that for actual operation.

- The PDF file of this manual is intended for display using Adobe® Reader® in single page viewing mode at 100% zoom.

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CHAPTER 1 Installation Overview

This chapter describes the workflow up to actual operation of the PRIMEQUEST2000 series server.
For an overview of the hardware and software and Product names and functions of the server, see the *PRIMEQUEST2000 Series General Description* (CA92344-0534).

1.1 Setup Workflow

This section describes the workflow for the tasks required to prepare the PRIMEQUEST2000 series server for operation.
Setup work consists of tasks performed by a field engineer and other tasks performed by the user.
The setup workflow is described below.
Field engineers perform the following tasks on this product.
Customers are not allowed to perform these tasks under any circumstances. Otherwise, electric shock, injury, or fire may result.

- Newly installing or moving equipment
- Removing the front, rear, and side covers
- Installing and removing built-in options
- Maintenance (repair and periodic diagnosis and maintenance)

1.1.1 Work performed by a field engineer

A field engineer sets up the unit. This includes the following tasks:

- Checking mounted components
- Preparing for main unit installation
- Checking partitions ... etc.

Remark

The following tasks need to be completed before the user starts the setup work:

- Unit setup by a field engineer
- MMB setup within the scope of responsibility of the field engineer
- Running test programs ... etc.

1.1.2 Work performed by the user

The user performs the following tasks in the order given.

TABLE 1.1 Work performed by the user

No.	Work item	Work tasks and description	See
1.	Setup	- Initializing partition settings Perform tasks such as setting partition names and configuring partitions individually.	3.1.2 Partition Settings
		- Connecting and configuring the MMB (operating environment) - Setting up the connection environment for actual operation. Set up the MMB connection environment, such as by setting the IP addresses for actual operation.	3.3.3Setting of Connection for Actual operating Environment
		- Initializing MMB settings Set the parameters for the entire MMB, such as the user account names or system names.	3.3.10Registration of User Account 3.3.11Setting of System Name 3.3.12Setting of Date and Time
		- Setting various modes Set modes as needed.	3.4.5Various mode settings
		- Starting the system and confirming system startup Start the system and confirm that it has started normally.	3.2System Startup
		- Saving setting information Save the setting information for the MMB.	3.5Storage of the configuration information
2.	Installing the OS and bundled software.	Install the operating system and bundled software.	CHAPTER 4Installation of Operating System and bundled software
3.	Work after installation	Specify the monitoring method, and save the specified information.	CHAPTER 5Types of work
4.	Configuring SNMP and security	Configure SNMP and security.	CHAPTER 7Power ON and OFF of the partition

CHAPTER 2 Preparing for Main Unit Installation

This chapter describes the preparation before main unit installation.
This preparation includes work up to power cable connection.

2.1 Safety Precautions

Observe the following precautions when installing the main unit.

⚠CAUTION

Installation of main units must follow the precautions below. Otherwise system may be damaged.

- Follow the precautions, warnings, and instructions labelled on the main unit.
- Do not block the vent holes.
- Do not install the main unit in a location exposed to direct sunlight or close to a device that may generate heat.
- Do not install the main unit in a location exposed to dust, corrosive gas, or salt spray.
- Do not install the main unit in a location subject to strong vibration. Install the main unit on a flat surface.
- Use grounded Category 3 wiring or better. Using another type of grounded wiring may cause abnormal operation.
- Do not route cables under the main unit. Do not allow cables to become taut.
- Do not disconnect the power cables while the main unit power is on.
- If it is hard to push the connector latch of a LAN cable or other cable when attempting to disconnect the cable, push it with a flathead screwdriver.

Forcibly inserting a finger may cause personal injury or damage the unit.

- Do not place anything on top of the main unit. Do not work above or on top of the main unit.
- Prevent rapid rises in the ambient temperature during winter. Such an abrupt temperature change may cause condensation to form in the main unit. Allow sufficient warm-up time before starting operation.
- Do not install the main unit close to a photocopier, air-conditioning unit, welder, or other device that generates electromagnetic noise.
- Do not install the main unit close to a device that generates large amounts of electrical noise.
- When installing the main unit, do not connect it to the power supply line for an elevator in the facility, since this would expose it to sudden voltage drops.
- Implement antistatic measures at the installation site.
- Confirm that the power supply voltage and frequency follows rating values labelled on main unit.
- Do not put any materials in the main unit. The main unit contains high-voltage components. So if metallic matter or other electro-conductive object enters the main unit through an opening, it may cause a short circuit. This may lead to fire, electric shock, or damage to the main unit.
- For details on maintenance of the main unit, contact the distributor where you purchased your product, or your sales representative.

2.2 Before Installing the Main Unit

Be sure that you understand the system configuration and have acquired all the requisite installation information before installing the main unit.
For a system overview and details on the system configuration, see the *PRIMEQUEST2000 Series General Description* (CA92344-0534). For details on the installation prerequisites, see the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).

2.3 Checking Environmental Conditions

This section describes the environmental conditions for main unit installation.
The conditions of the main unit operating environment depend on the altitude of the installation site.
For details on the environmental conditions of the PRIMEQUEST2000 series, see 1.3 Installation Specifications in the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).
For details on the recommended temperature and humidity of the computer room, see the *SPARC Enterprise/PRIMEQUEST Common Installation Planning Manual* (C120-H007EN).

2.4 Preparing the Power Supply Equipment

This section describes the electrical specifications, facility power requirements, and grounding for the PRIMEQUEST 2000 series. To prevent accidents, confirm that the power supply equipment can supply enough power to the system.
Electricianing and installation work shall conform to local ordinances and local and national government regulations.
For details on the power supply equipment, see the *SPARC Enterprise/PRIMEQUEST Common Installation Planning Manual* (C120-H007EN).

2.4.1 Electrical specifications

For details on the electrical specifications of the PRIMEQUEST2000 series, see 1.3 Installation Specifications in the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).
For details on the power cables, see 2.2.1 Basic interfaces and peripheral devices in the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).
For details on the connectors and their shapes, see 2.4.1 PRIMEQUEST2000 series main unit in the *PRIMEQUEST 2000 Series Hardware Installation Manual* (CA92344-0535).

2.4.2 Facility power requirements and characteristics

To obtain the required degree of redundancy, the facility must have two independent supplies of power. Connect the circuit breakers to the power receiver provided by the electric power company or to a UPS (uninterruptible power supply).
If the main unit operates in an environment that experiences frequent power failures or has a power source that often becomes unstable, the component failure rate tends to rise.
The PRIMEQUEST2000 series supports the following power feed:

- redundant power feed
- dual power feed

For details on the power line configurations for redundant power connections and dual power connections, see 2.3 Power Cable Connections in the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).

2.4.3 Grounding

The PRIMEQUEST2000 series is shipped with grounded (three-wire) power cables. You need to connect the power cables to outlets with ground terminals. To determine the type of power supply in your building, contact the building manager or a qualified electrician.

2.5 Checking the Installation Site

Before installing the main unit, confirm that the installation site has enough space for the required service (maintenance) area and for accommodating the peripheral devices. For details on checks of the installation site, see Chapter 1 Installation Information in the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).

2.6 Preparing to Install the Main Unit

TABLE 2.1 Accessories required in main unit installation lists the accessories required in main unit installation. Prepare these accessories in advance.

TABLE 2.1 Accessories required in main unit installation

Accessory name	Description
No. 2 Phillips screwdriver	Used to mount the unit in a rack.
Wrist strap	Used to prevent main unit damage from static electricity discharged from your body.
Conductive mat	Required for some system configurations. To order any of the accessories, contact the distributor where you purchased your product, or your sales representative.
Ethernet Category 5 cable or better	
Console PC-to-LAN cable (for user LAN)	
External switching hub	Used to connect the PRIMEQUEST2000 series server to an external switching hub via a LAN.
Multitester	Used to check the input AC voltage.

2.7 Confirming the Supplied Parts

Confirm that the delivered parts match the shipping list provided with the main unit.
If any of the parts listed in the shipping list or performance records are missing, incorrect, or damaged, contact the distributor where you purchased your product, or your sales representative.

Note

If you also purchased optional modules for installation, such as additional memory modules or PCI Express cards, first confirm that the main unit functions normally before mounting the optional modules in the main unit.

2.8 Mounting the Main Unit in a 19-inch Rack

The PRIMEQUEST2000 series server is mounted for use in a 19-inch rack. For details on mounting, see Appendix A Racks in the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).

2.9 Connecting the Power Cables

This section describes how to connect the power cables.
You need to connect the power cables to outlets with ground terminals.

Remark

The main unit and PCI_Box are designed to operate with a power supply facility that supports grounded wiring. Do not connect the main unit and PCI_Box to a power supply facility that does not provide grounded wiring. To determine the type of power supply in your building, contact the building manager or a qualified electrician.

Note

If PSU configuration is redundant and power cables are connected first, there is a case the Alarm LED (Amber LED) on OPL is turned on. Also, “Configuration error in excess unit” message is logged in System Event Log. This message does not indicate a failure of the power supply. Please set Power Feed Mode or PSU Redundant Mode in MMB-Web UI.

Operations

1. Confirm with an engineer specializing in electricity that the input power satisfies power requirements. For details on the power requirements, see 1.3 Installation Specifications in the *PRIMEQUEST2000 Series Hardware Installation Manual* (CA92344-0535).
2. Confirm that the power cables are connected to the AC inlets of the main unit and PCI_Box. Also confirm that the power cables are secured with the AC cord clamps for the AC inlets on the main unit.

- The cable is passed through the circle of release Thailand.
- Release tie is tightened and the power cable is fixed. The insulation connector is mistaken from the server and does not come off.

Remark

Release tie can be detached by bending it with the choke end of the zip tie.

3. Group all the cables that run outside the main unit and PCI_Box into power cables and signal cables, and secure them firmly to the cable holders of the 19-inch rack with cable ties.
4. Confirm that the AC power breaker is off. Then, connect the power cables to AC power. For details on the power cable connections, see "2.4.2Facility power requirements and characteristics".

FIGURE 2.1 Power cable socket locations (PRIMEQUEST2000 Series)

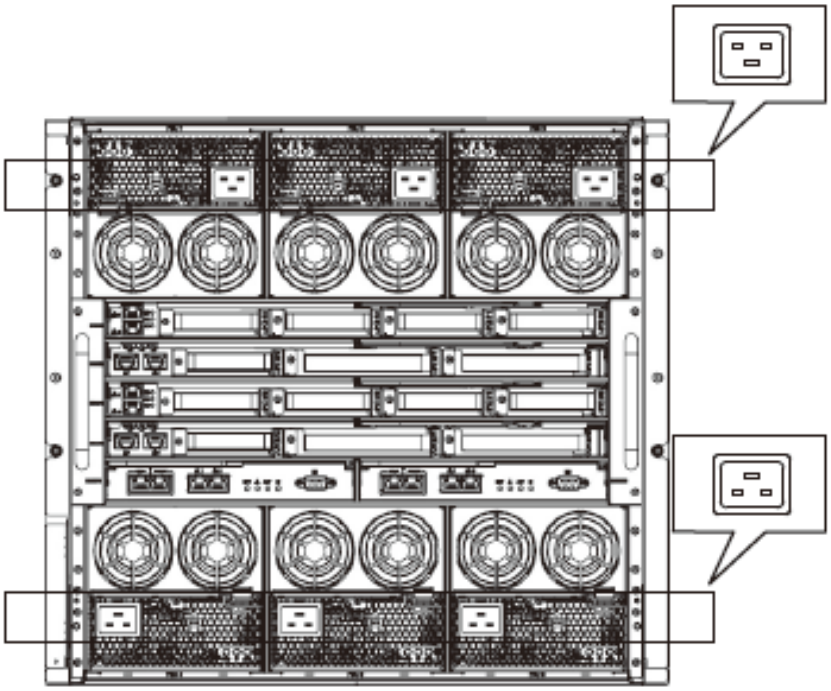
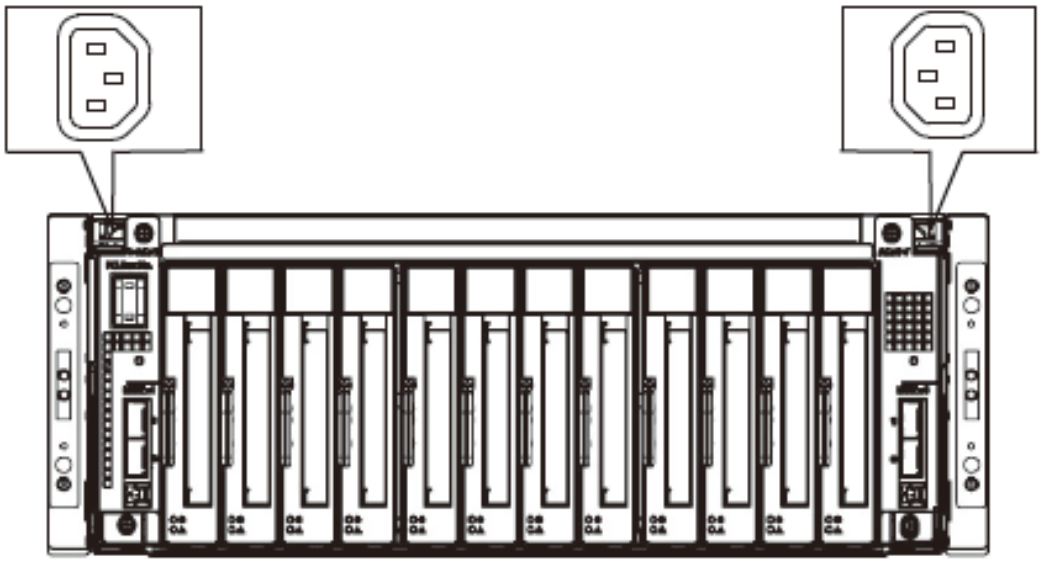


FIGURE 2.2 Power cable socket locations (PCI_Box)



CHAPTER 3 Work before Operating System Installation

This chapter describes the work that must be done before you install the operating system on the PRIMEQUEST 2000 series and setting of actual operation and various setup works.

3.1 Before Starting Setup

This section describes the items necessary to predetermine before the setup.

3.1.1 MMB Settings

It is necessary to predetermine the following items to configure MMB.
- IP address, hostname, subnet mask, and gateway address
- IP address of the PC used as the MMB console (referred to below as the MMB console PC)
- ID for MMB User Account
- PRIMEQUEST 2000 series system name (Also used as the system name for SNMP)
- Management LAN environment

For details on setting of MMB, see "3.3 Connection and Setting of MMB".

Note
The management LAN, remote maintenance LAN and any other LAN must be configured as networks with different subnet masks.

3.1.2 Partition Settings

To construct multiple partitions, following items should be predetermined.
- Number of partitions
- Name of Partition
- Configuration of Partition
- Home SB

For details on setting of partition, see "3.4 Partition Configuration"
If partition name and host name of the operating system installed on the partition are the same, operations management of partition becomes easier.

Note
- For 2400E/2800E Model
  - In case PCI Address Mode is set to PCI Segment Mode, PCI ROM Priority parameter in BIOS menu must be set "EFI Compatible ROM" if RAID disk drives including HDD and SSD are to be mounted in Non Home SB.
  - In case PCI Address Mode is set to PCI Segment Mode, Legacy OS installation to HDD/SSD on SB is possible only in Home SB.
  - In case PCI Address Mode is set to PCI Segment Mode, Legacy OS booting from HDD/SSD on SB is possible only in Home SB.

3.2 System Startup

Power control required to startup the system is described in this section.
In case of not being turned on the main power supply of the main unit, follow the procedure described below.

3.2.1 Power-on/off of main unit

Power-on/off of main unit is described.

Power on

The procedure to turn on the main power supply of the main unit is described below.

(Ignition)
When over current is detected and the power is cut off by tripping the breaker of the AC power or optional power distribution box, there is a possibility that failure, such as short circuit occurring in the main unit. In such case, contact to your sales representative or field engineer without turning on the power supply again.

Note

- When the power supply is turned on again after removing the power cable from the AC Inlet, connect the power cable after ten seconds or more.

The procedure to turn on the main power supply of the main unit is described below.

1. Connect the power cable to the AC inlet of the main unit.

   For details on the power cable connection, see "2.9 Connecting the Power Cables".
2. Connect to AC power or optional power distribution box.
3. Turn on the power supply by turning on the circuit breaker of AC power.

   After removing the power cable, follow the procedure sequentially from step 1 to turn on the power supply again

Power off

The procedure to turn off the main power supply of the main unit is described below.

(Data corruption)
Turn off the main power supply of the main unit after confirming that System Power LED of Operator Panel (OPL) is turned off. If the main power supply is turned off while the System Power LED of the OPL is ON, there is a risk of the data being corrupted.

The procedure to turn off the main power supply of the main unit is described below.

1. Turn off the power supply of the main unit. For details, see "7.1.2 Power OFF of the partition".
2. Confirm that the System Power LED of OPL is turned off.

   Remark

   When the System Power LED of OPL is turned on, it is in the state that power supply cannot be turned off. When

   Alarm LED is turned on, contact to your sales representative or field engineer.
3. Remove the power cable connected to power distribution box.

3.3 Connection and Setting of MMB

The MMB has LED display or provides view for server maintenance or administration that the field engineer constructs the environment for testing and test program is executed. Therefore, it is necessary to reconfigure MMB from test environment to actual operating environment. Skip the steps for items already set by field engineer.
After MMB connection, implement following steps by using MMB Web-UI (Web User Interface).

- User account registration
- Security setting
- Time setting

Implement following procedure of connection and setting of MMB.

TABLE 3.1 Flow of connection and setting of MMB

Procedure	Item	Description	Refer to
1.	Connection of MMB console PC	Connect the MMB console PC to set up the environment for actual operation.	3.3.1 Connecting the MMB console PC
2.	Initial setting of MMB	Initialize MMB settings before setting up the connection environment for actual operation.	3.3.1 Connecting the MMB console PC
3.	Connection setting of actual operating environment	The MMB is set for a test connection. Set up the connection environment for actual operation.	3.3.3 Setting of Connection for Actual operating Environment
4.	Login to MMB	Log in to the MMB. There is also a description of the MMB Web-UI window for reference.	3.3.4 Login to MMB 3.3.5 Web-UI Window View
5.	Network setting of actual operation	The MMB is set for testing purposes, so configure the network and Web servers for actual operation. Make the required settings appropriate to your operation mode.	3.3.6 Network set up of MMB 3.3.7 Set up of telnet 3.3.8 Configuration of DNS server 3.3.9 Set up of Alarm E-Mail
6.	Various initial settings of MMB	Various initial settings of MMB are implemented. -Registration of user account. -System name setting -Date/ Time setting It is recommended to take the back up of information of the settings when the initial settings are completed. For details on the back-up of information which is set, see "3.5 Storage of the configuration information".	3.3.10 Registration of User Account 3.3.11 Setting of System Name 3.3.12 Setting of Date and Time

Since all the screenshots in this manual are examples, depending on the configuration, these may differ from the actual screen displays.

3.3.1 Connecting the MMB console PC

This section describes the connection of the MMB and MMB console PC.
To reconfigure the environment of the operation, connect the COM port of the MMB console PC and the External interface RS232C (COM port) of the MMB with RS232C cross cable.
For the mounting location and external interface overview of the MMB, refer to the figure below.

FIGURE 3.1 External Views of Mounting Locations and External interface of MMB

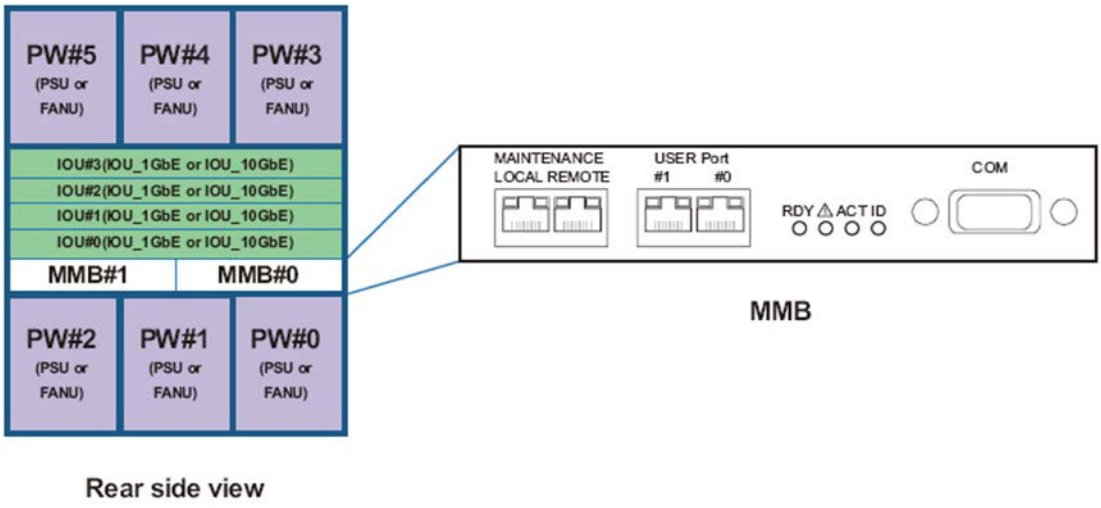


TABLE 3.2 External interface of MMB

External interface	Quantity	**Remark**
RS232C(COM Port)	1	Used by the field engineer when setting-up the device. It does not use in normal operations.
LAN 1000Base- T	2	User port
LAN 100Base-TX	2	Maintenance -[LOCAL] : CE Port -[REMOTE]: REMCS Port

Set the terminal software by using following contents, at the time of connecting COM port,

TABLE 3.3 contents of setting of terminal software

Setting item	Value
Bit/ second	19200
Data bit	8
Parity	No
Stop bit	1
Flow control	No
Emulation	VT100

3.3.2 MMB Initialization.

The procedure for the MMB initialization is described below.
If field engineer initialized the MMB, it is not necessary to implement following procedure.

Operations

1. Turn on the power supply of the main unit.
   → Alarm LED of each unit is turned on while MMB Ready LED is blinking (During initialization).
   After MMB Ready LED turns from blinking to lighting, the login prompt is displayed.
2. Once MMB Ready LED is turned on (Initialization complete), confirm that the Alarm LED of each unit has been turned off.
3. Login to Administration by using terminal software from MMB console PC.
   → When you first log in, you will be asked to change the Administrator password.
4. Set the password.
   Note
   The password with eight more characters should be set.
   Usable character codes are alphanumeric characters ([A-Z] [a-z] [0-9]) and the following symbols
   ! " # $ % & ' ( ) = . ^ ~ ¥ ` [ ] { } : * ; + ? < . > , / _ |
   If the entered password is invalid, re-setting of the password is requested.

5. Then set MMB network.
   Remark
   When IPv4 and IPv6 are operated, both IPv4 and IPv6 are set.
   - In case of IPv4
   Set the IP Address by using the following commands.
   # set hostname <FQDN type host name>
   # set ip <IP Address> <netmask>
   # set gateway <default gateway IP Address>
   # set http enable
   Example: In case of IP Address:192.168.0.10/ netmask:255.255.255.0/ gateway:192.168.0.1

```
Administrator> set ip 192.168.0.10 255.255.255.0
Administrator> set gateway 192.168.0.1
```

   - In case of IPv6
   Set IP Address by using following commands.
   # set hostname <FQDN type host name>
   # set ipv6 [auto | <IP Address/Prefix>]
   # set gateway_ipv6 <default gateway IP Address>
   # set http enable
   Example: In case of IP Address=2001:2345:6789::10/ Prefix=64/ gateway=2001:2345:6789::1

```
Administrator > set ipv6 2001:2345:6789::10/64
Administrator > set gateway_ipv6 2001:2345:6789::1
```

6. Enable http by set http enable command.

Web-UI of MMB can be accessed from MMB console PC through LAN.

```
Administrator> set http enable
```

Remark

Use set https command to enable https.

```
Administrator> set https enable
```

7. Enable telnet by using set telnet enable command.

```
Administrator> set telnet enable
```

8. Set date and time as required.

   Use the following commands.

   Administrator> set date MMDDhhmm[[CC]YY][,ss]

   Example: To set 2013/7/27 as date and 13:10:00 as time

```
Administrator> set date 072713102013,00
```

3.3.3 Setting of Connection for Actual operating Environment

According to the following operations, set the connection environment for the actual operation.

- Set IP address of MMB console PC
- Connect MMB console PC to the User port of the MMB
- Connect external LAN of PRIMEQUEST 2000 series

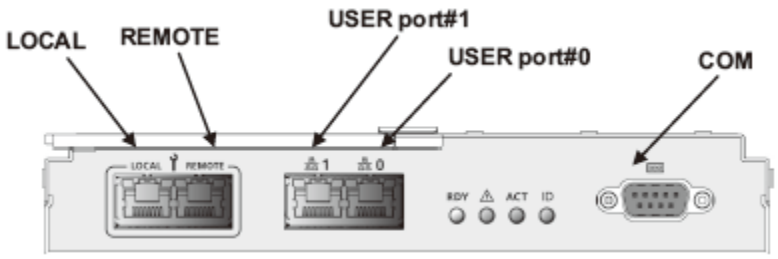
Setting of IP address of MMB console PC

Set the IP address of the PC used as the MMB console. See the Manual of the PC to be used for the setting method.

Connection of MMB console PC to the user interface of the MMB

Connect the MMB console PC to the user port #0 of the MMB using LAN cable. Once it is connected, communication between MMB console PC and MMB is possible via LAN.

FIGURE 3.2 Location of MMB user port

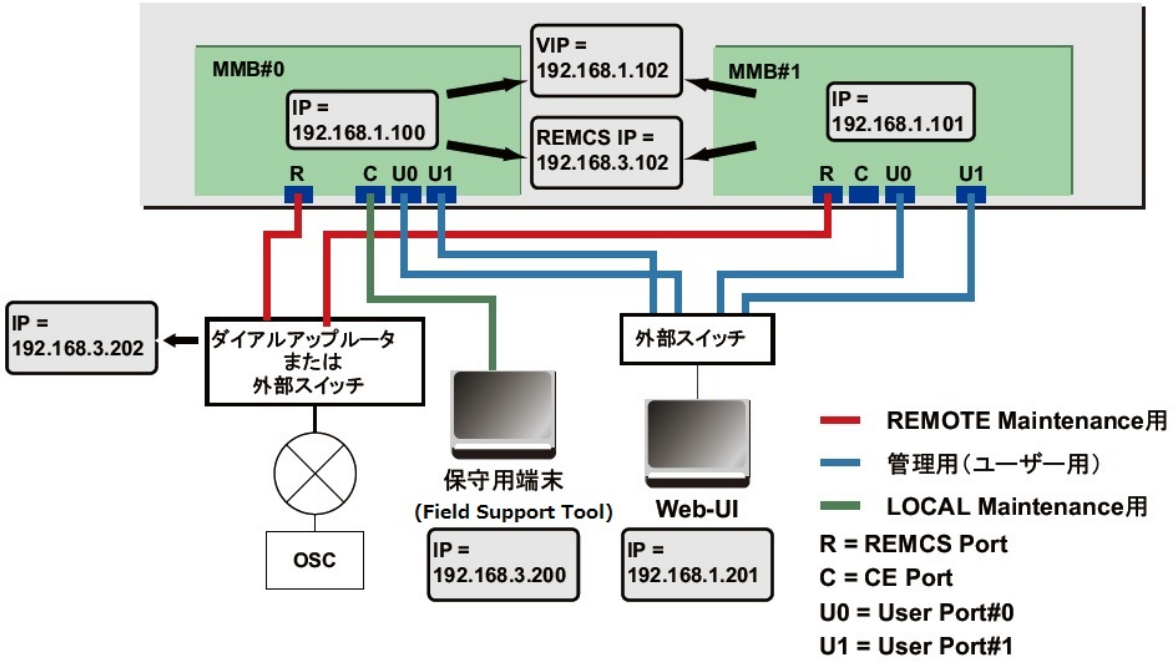


Connection of External LAN of PRIMEQUEST 2000 Series

Configuration of external LAN connection of PRIMEQUEST 2000 series and the notes for external LAN connection are described below. Connection to an external LAN is recommended after setting the security. For details on security, see "6.5 Set up of security"

.

FIGURE 3.3 Network Configuration and IP Address of Management LAN



Ports for managing MMB#0 and MMB#1 are connected to the external switching hub device using a LAN cable. At the same time MMB console PC is also connected to the external switching hub device. Physical IP address and Virtual IP address of MMB#0 and MMB#1 are set in identical subnet.

- Physical IP Address (In the above figure, MMB#0=192.168.1.100, MMB#1=192.168.1.101)
- Virtual IP Address (In the above figure, 192.168.1.102)

For external connection (Web browser, Terminal for Maintenance, REMCS, etc.), communication is done by virtual IP address.

TABLE 3.4 Settings required for connecting external LAN

Conditions	Required settings
When using the switching hub which supports the circulatory prevention function (Spanning Tree Protocol or the domain Separation, etc.) in the external switch	Prevent circulatory prevention function to [disable] Spanning Tree Protocol of connection port of switching hub and the main unit or to set Domain Separation 'ON'.
When the data given below corresponds to any of the category- -Destination server becomes external server which is passed through the firewall. -Use a mail server which restricts the IP address.	It is necessary to set the firewall and mail server in such a way that physical IP address packets of MMB #0 and MMB#1 can pass through.
For REMCS connection	Connection format is as given below. - When connecting to internet: Connect REMCS port to the external switching hub. Or connect to the center by restricting the firewall from the external switch of the management port. - When connecting to P-P Connect each REMCS port of MMB of MMB#0 and MMB#1 to the Dial-up route directly. For details on REMCS linkage, see PRIMEQUEST 2000 series REMCS Service Installation Manual (CA92344-0542).

Remark

- Packets are transmitted from MMB in "NTP", "Alarm E-Mail", and "REMCS". When both the physical IP address and the virtual IP address of MMB are set, the transmission source IP address of packet is considered as the physical IP address of the MMB.

- Physical IP address of MMB is also used in PRIMECLUSTER linkage.

3.3.4 Login to MMB

The method of login to the MMB is described below.

Login/ Logout in MMB Web-UI

The procedure of Login/Logout for MMB Web-UI is described below.
Specify any of the following to login to Web-UI.

- Virtual IP Address
- Fully Qualified Domain Name (FQDN) corresponding Virtual IP Address

Note

- MMB Web-UI supports the following browsers. **Note** that, if the browser other than this is used, Web UI window may not display correctly.
  - Internet Explorer 9 onwards
  - Firefox 20 onwards
- Do not multiple login by using Web-UI from one MMB console PC to PRIMEQUEST 2000 series (Also includes multiple login with the same user name). If multiple login is done, the following phenomenon may occur by the types and version of a browser to be operated. Moreover, do not multiple login by using multiple tabs.
  - The operation authority of the user logged in previously with Web-UI might change to the operation authority of the user who logs in later.
  - When one Web-UI is logged out, all Web-UIs might be logged out.

Remark

To specify the FQDN, the DNS server should be set in the MMB console PC

For details on DNS server setting, see "3.3.8 Configuration of DNS server",

● Login

1. Start the Web browser.

   Remark

   Enable JavaScript and Download in the browser setting.

2. Enter next URL.

TABLE 3.5 URL to be entered for Login

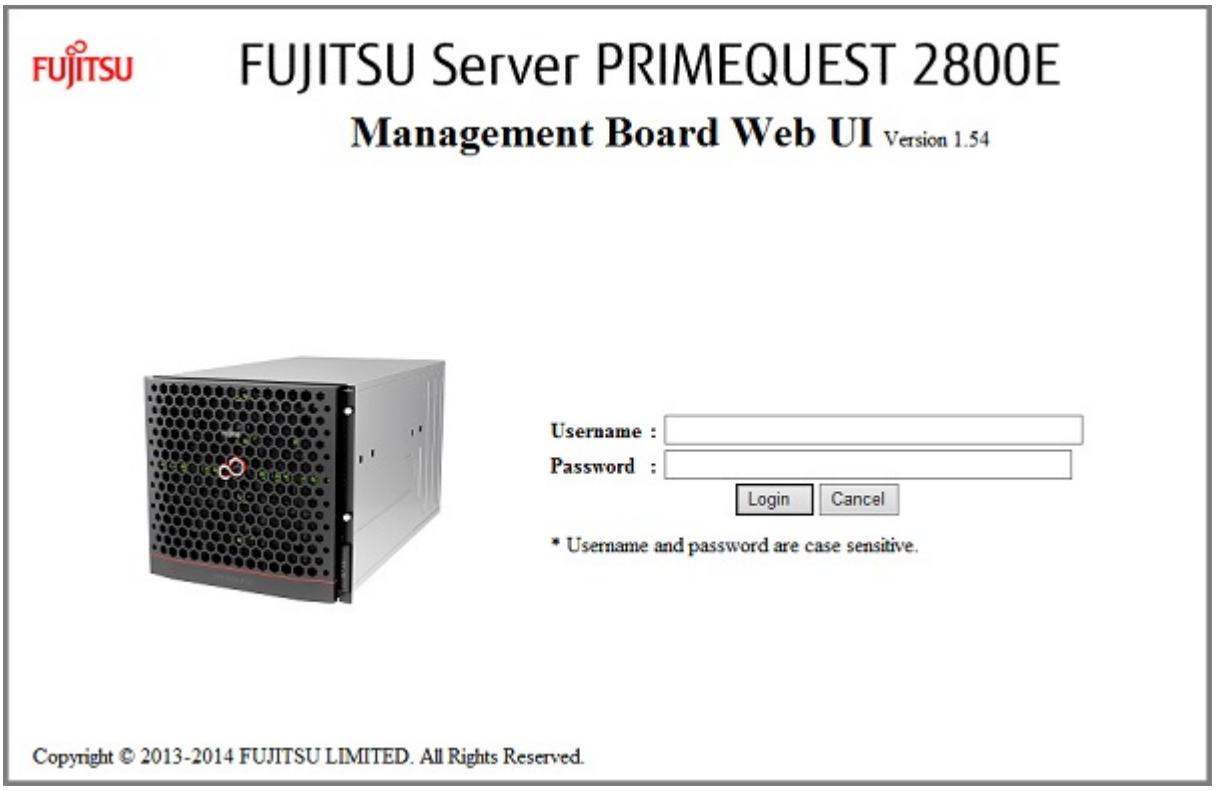
Standard	http://nodename:adminport http://nodename:adminport/login.cgi (In case of Windows Server 2012 R2, Windows Server 2012 and Windows Server 2008 R2)
SSL	https://nodename:adminport
Remark	Above-mentioned nodename: adminport is described in following format. Nodename: FQDN of MMB or IP Address. adminport: port number assigned at the management port of the MMB (Default value is 8081 and 432 in case of SSL)

Note

When an https connection is established, a warning message appears because the certificate is not one from a third-party organization. Ignore it and continue establishing the connection.

3. Since MMB Web-UI login window is displayed, enter user account and password and click on [Login] button.

FIGURE 3.4 MMB Web-UI [Login] Window



Remark

At the time of initial start-up and if the settings have not been changed, following default user account and password are applicable.

TABLE 3.6 Default user account/password

Username	Administrator
Password	Password set up by the field engineer when setting a device

● Logout

Click [Logout] on the Navigation Bar.
→ Log out from Web-UI.

3.3.5 Web-UI Window View

For details on Web-UI window view, see “Chapter 1 Web-UI Overview” of PRIMEQUEST 2000 Series User Interface Operating Instructions (CA92344-0538)

Remark

When [Read Error] is displayed on Web-UI Window, confirm the contents by referring to “11.2Troubleshooting” of PRIMEQUEST 2000 series Administration Manual (CA92344-0537). In spite of referring to the manual, if the error cannot be resolved, recurs, contact repairs inquiry counter or a sales representative.
Before making contact, confirm the model name and serial number shown on the label on the device and communicate the same.

Basic operations in MMB Web-UI

The flow of basic operations is as follows.

1. The Menu is selected from Navigation Bar.

→ The Submenu of the selected menu is displayed in the submenu area.

2. The Menu is selected from the submenu.
   → The window corresponding to the selected menu is displayed in the content area.
3. Information displayed on the window is confirmed and set.
   When [Apply] Button is clicked, the information is set.
   When [Cancel] Button is clicked, the information returns to the previous status.

Note
When Internet Explorer is being used, if the display of dialog box for confirmation of process execution, or the display of dialog box or for notification of process completion exceeds 2 minute or more, its connection with MMB Web-UI is cut. In this case, login again to MMB Web-UI.

3.3.6 Network set up of MMB

MMB Network is set up. For the items already set at this time, confirm the setting contents. For the items not set, make the settings.
Following IP Addresses are set.

- Virtual IP Address used to access Web-UI
- Physical IP Address assigned to the MMB interface.

See "3.5 Storage of the configuration information" for the backup of information which is set

Note

- Set up of MMB Physical IP Address is not required, as long as MMB is not mounted at the installation location MMB#1, and PRIMECLUSTER linkage is not performed.
- Log in to 'Administrator privileges, to set up MMB network.
- When on [Network Interface] window, if [Apply] Button is clicked after changing [MMB#0 IP Address] or [MMB#1 IP Address]:
  To reflect the settings, the network is temporarily stopped, and Web-UI is cut. It is possible to connect to Web-UI again by selecting Web-UI menu.
- When Virtual IP Address is changed:
  Connection with MMB Web-UI is cut. Re-login is required when MMB Web-UI is to be used.

Remark
When Virtual IP Address is set up:
The Web browser has an access for the virtual IP address of PRIMEQUEST 2000 series. Therefore, the MMB Web-UI cannot be accessed by specifying the physical IP address of MMB#0, and MMB#1.
Terminal for maintenance and REMCS can access as against the IP address set in [Maintenance IP Address] of [Network Configuration]-[Network Interface].

Operations

1. Click [Network Configuration]-[Network Interface].
   → [Network Interface] screen is displayed. For details on [Network Interface] screen, see
   '1.5.2[Network Interface] Menu' of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.5 Example of [IPv4 Interface] Window

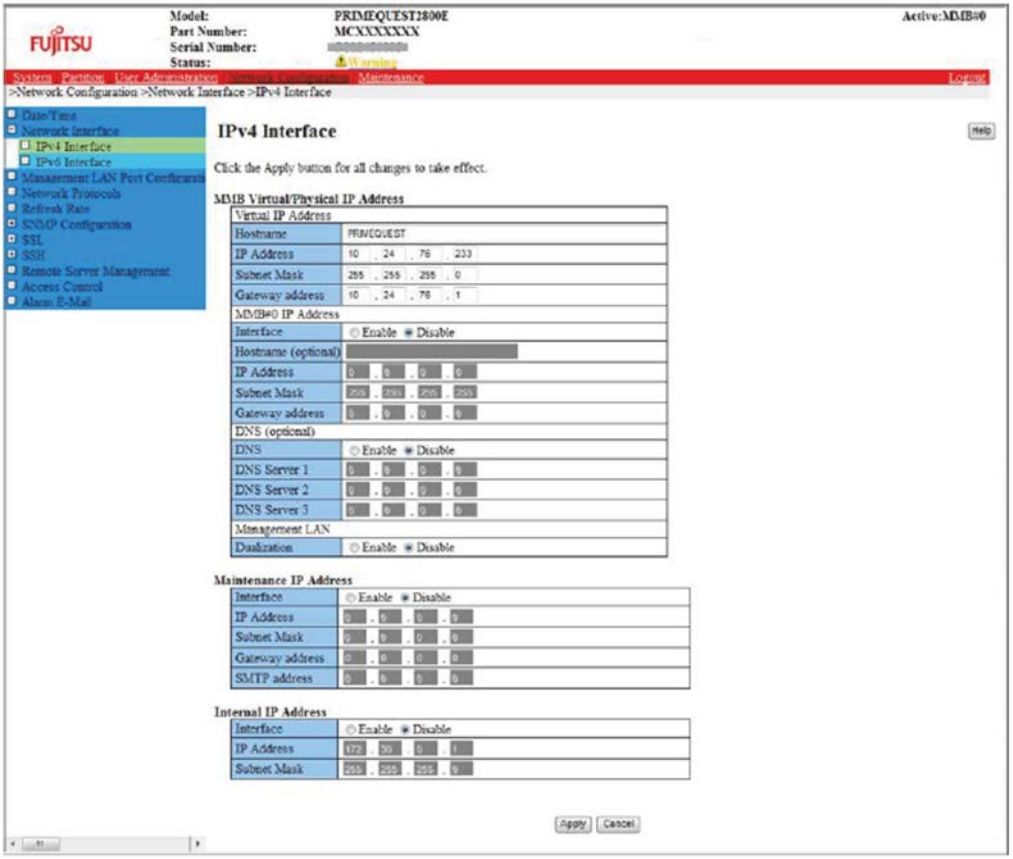
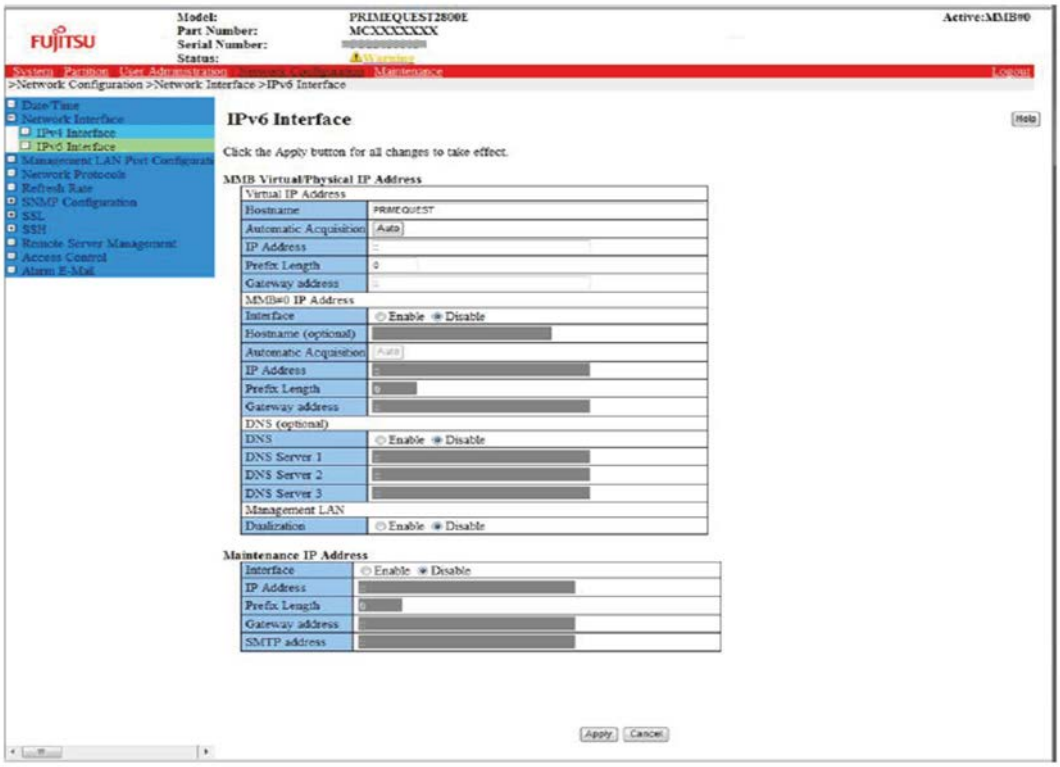

FUJITSU
Model: PRIMEQUEST2800E
Part Number: MCXXXXXXX
Serial Number:
Status: Warning
Active:MMB#0
System Partition User Administration Network Configuration Maintenance Logout
>Network Configuration >Network Interface >IPv4 Interface
Date/Time
Network Interface
IPv4 Interface
IPv6 Interface
Management LAN Port Configuration
Network Protocols
Refresh Rate
SNMP Configuration
SSL
SSH
Remote Server Management
Access Control
Alarm E-Mail
IPv4 Interface
Help
Click the Apply button for all changes to take effect.
MMB Virtual/Physical IP Address
Virtual IP Address
Hostname PRIMEQUEST
IP Address 10 . 24 . 76 . 233
Subnet Mask 255 . 255 . 255 . 0
Gateway address 10 . 24 . 76 . 1
MMB#0 IP Address
Interface Enable Disable
Hostname (optional)
IP Address 0 . 0 . 0 . 0
Subnet Mask 255 . 255 . 255 . 255
Gateway address 0 . 0 . 0 . 0
DNS (optional)
DNS Enable Disable
DNS Server 1 0 . 0 . 0 . 0
DNS Server 2 0 . 0 . 0 . 0
DNS Server 3 0 . 0 . 0 . 0
Management LAN
Dualization Enable Disable
Maintenance IP Address
Interface Enable Disable
IP Address 0 . 0 . 0 . 0
Subnet Mask 0 . 0 . 0 . 0
Gateway address 0 . 0 . 0 . 0
SMTP address 0 . 0 . 0 . 0
Internal IP Address
Interface Enable Disable
IP Address 172 . 50 . 0 . 1
Subnet Mask 255 . 255 . 255 . 0
Apply Cancel

FIGURE 3.6 Example of [IPv6 Interface] Window



2. The values are entered in [IP Address], [Subnet Mask] (*1) of [Virtual IP Address]. Host name is also set up.
   *1: [Prefix Length] is entered at the time of [IPv6]. [Gateway address] is also entered at the time of [Gateway address].
3. Each item is entered by clicking [Enable] for [Interface] in [MMB#0 IP Address] or [MMB#1 IP Address]. Here, the assigned Physical IP Address is specified.
4. [Apply] button is clicked when the required items are set up.

Notes

If an incorrect value of IP Address is set, MMB Web-UI is not displayed. In that case, the correct value is set by connecting MMB console PC to the MMB COM port.

Remark

The Physical IP Address and the Virtual IP Address of MMB#0, and MMB#1 are set up in the same subnet.

3.3.7 Set up of telnet

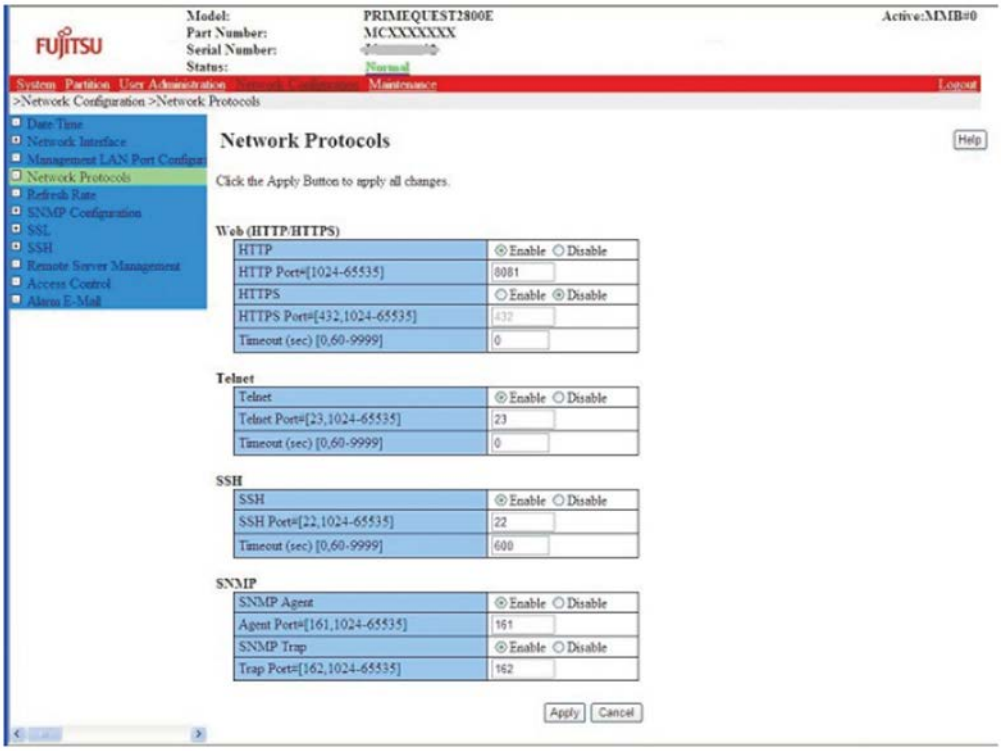
MMB telnet is set up.
See "3.5 Storage of the configuration information" for the backup of set up information.
The following condition must be satisfied in advance when field engineers perform the Maintenance tasks on this product.
- Video Redirection and Virtual Media are available.
  For details on how to setup the procedure, see Chapter 1.3.6 [Console Redirection Setup] window in the PRIMEQUEST 2000 Series Tool Reference (CA92344-0539).
- SSH or Telnet is available.
  For details on how to setup the procedure, see Chapter 1.5.4 [Network Protocols] window in the PRIMEQUEST 2000 Series Tool Reference (CA92344-0539).

Note
To set up telnet, log in to Administrator privileges.

Operations

1. Click [Network Configuration]-[Network Protocols].
   → [Network Protocols] window is displayed. For details on [Network Protocols] window, see "1.5.4[Network Protocols] Window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.7 Example of [Network Protocols] Window



2. Items of [Telnet] are set.

   Note

   MMB uses the following fixed port number of TCP/IP. Do not change the following port numbers.
   - 623/udp: For RMCP communication
   - 664/udp: For RMCP communication

3. Click [Apply] button.

3.3.8 Configuration of DNS server

Only when using a DNS server, set up DNS server.
For the backup of set up information, see "3.5 Storage of the configuration information".

Note
Log in to Administrator privileges to set up the above-mentioned items.

Operations

1. Click [Network Configuration]-[Network Interface]. Select [IPv4 Interface] or [IPv6 Interface].
   → [IPv4 Interface] or [IPv6 Interface] window is displayed. For details on [IPv4 Interface] or [IPv6 Interface] window, see "1.5.2 [Network Interface] Menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.8 Example of [IPv4 Interface] Window

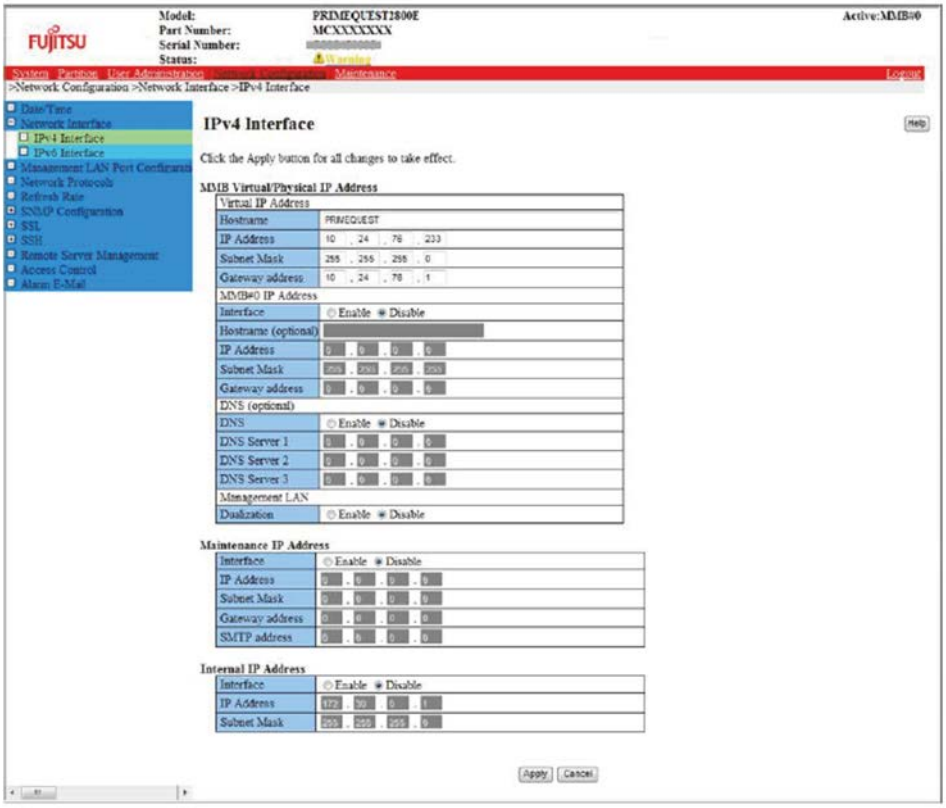
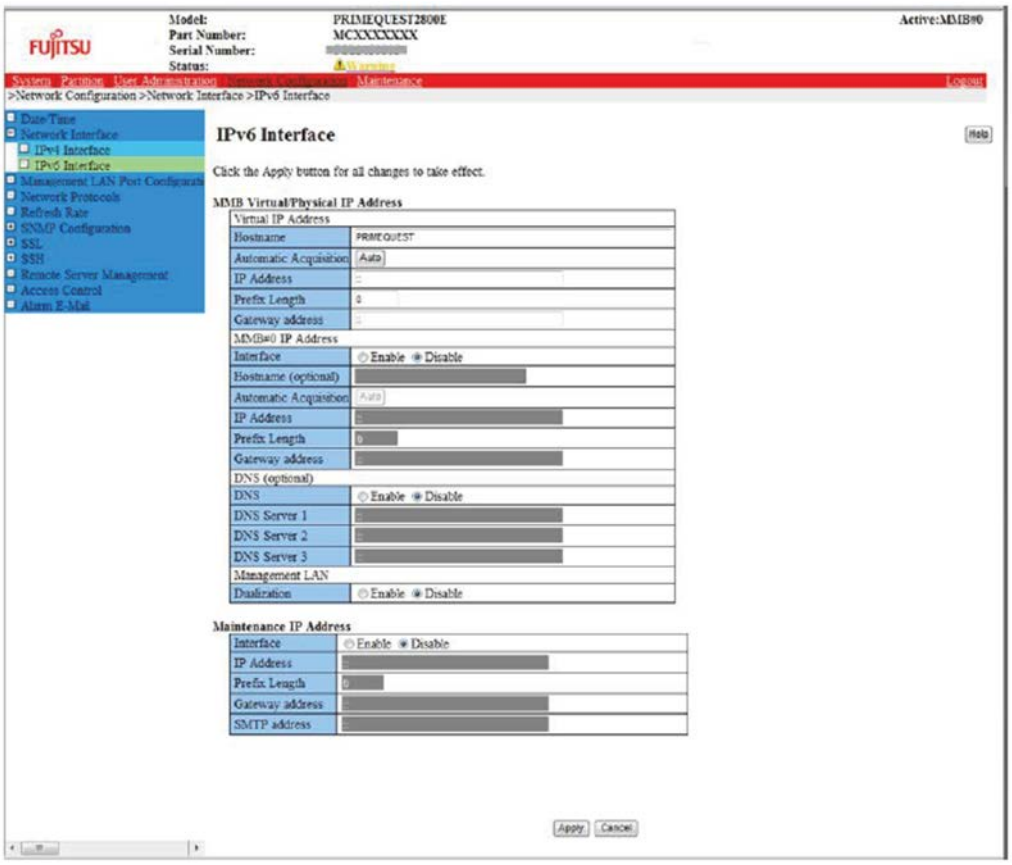


FIGURE 3.9 Example of [IPv6 Interface] Window



2. Click [Enable] of [DNS] in [DNS (optional)], then each item is entered.
3. Click [Apply] button after setting the required items.

3.3.9 Set up of Alarm E-Mail

Set up the following for Alarm E-Mail.
- Whether to notify through E-Mail, when an error occurs during operation.
- Error level and notification destination at the time of notifying.

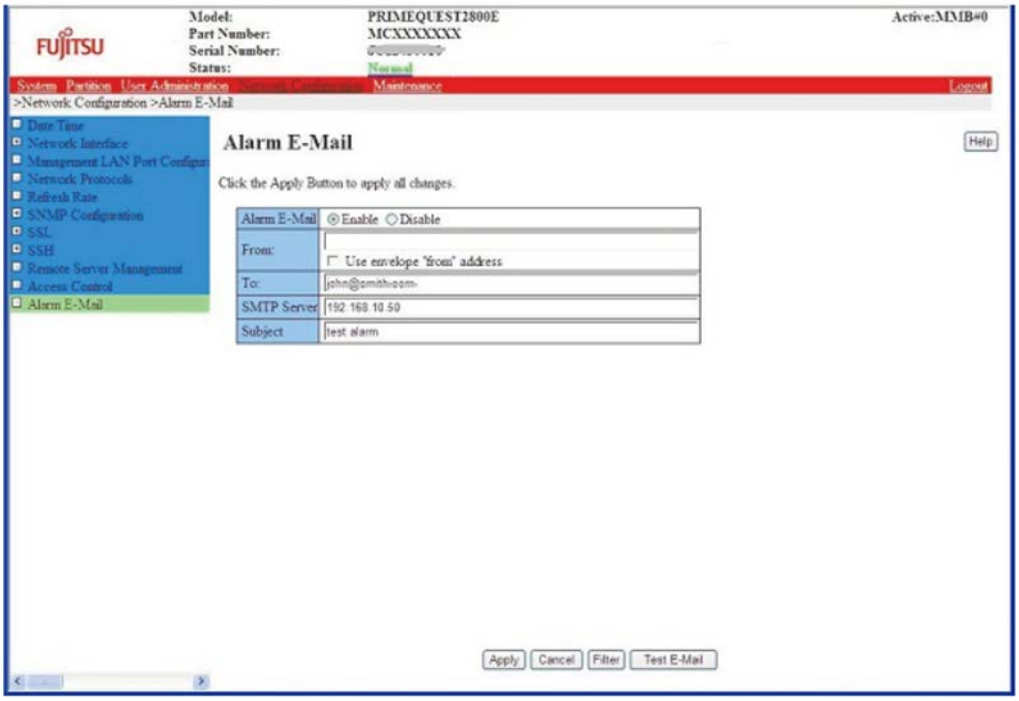
For the backup of the set up information, see "3.5 Storage of the configuration information".

Note
To set up the above mentioned items, log in to Administrator privileges '.

Operations

1. Click [Network Configuration]-[Alarm E-Mail].
   → [Alarm E-Mail] window is displayed. For details on [Alarm E-Mail] Window, see "1.5.11 [Alarm E-Mail] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.10 Example of [Alarm E-Mail] Window



2. Enter required items.

Remark

When transmitting [Alarm E-Mail], [From] address to be transmitted to SMTP server is as follows.
- When [Use envelope "from" address] checkbox is on,
  The address set up in [From] of [Alarm E-Mail] window becomes [From] address to be transmitted to SMTP server.
- When [Use envelope "from" address] checkbox is off (initial set up)
  Following [From] address is transmitted to SMTP server according to the format of [Hostname], set up in [Virtual IP Address]-[Hostname] in [Network Configuration]-[Network Interface] window.
- In FQDN format: root@[Hostname]
- Except in FQDN format: root@localdomain.localdomain
  Mail address set up in [From], is used as [From] address of the mail to be transmitted to mail receiver ([To]).
- When FQDN is specified in SMTP Server name, DNS Server needs to be set up. DNS Server can be set up

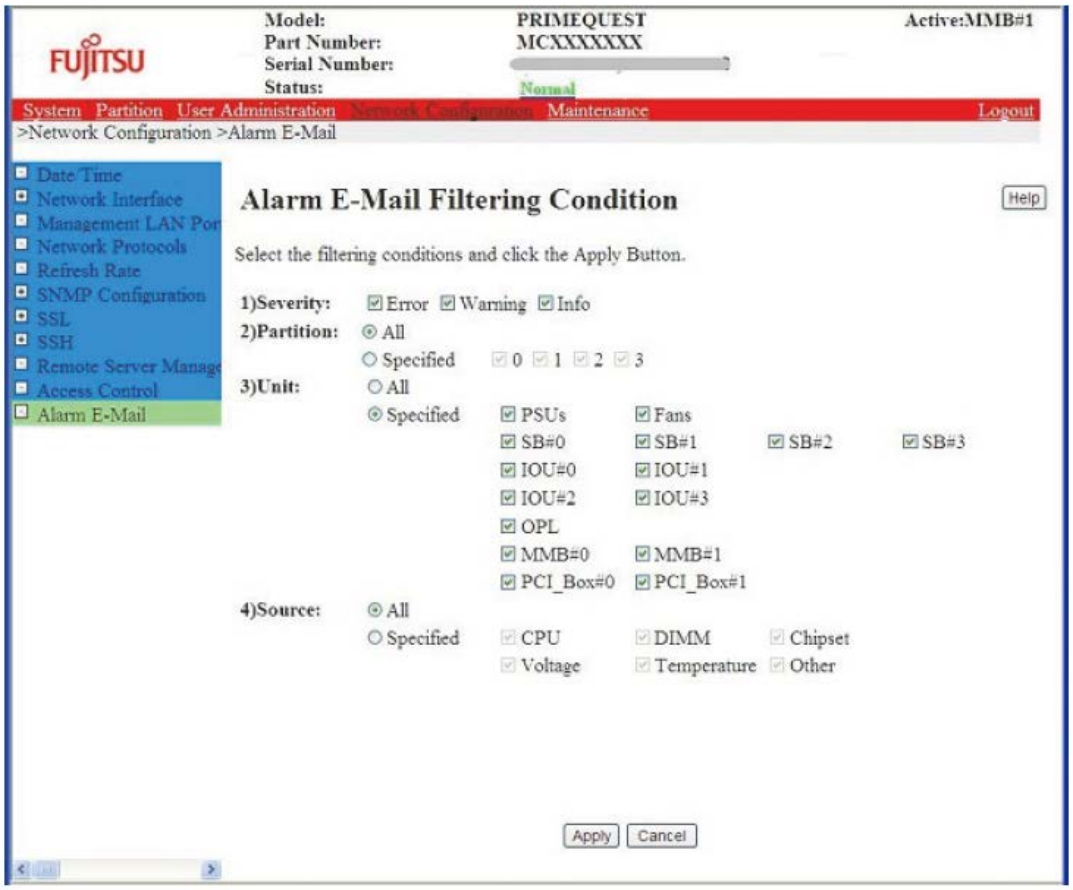
- from [Network Configuration]-[Network Interface].

3. The operation button is clicked depending upon the purpose.
   - When the condition for transmission of mail is set up: [Filter] Button
   - When the settings are to be enabled: [Apply] Button
   - During Test transmission: [Test E-Mail] Button

Setting the conditions for transmission of mail

1. To set the conditions for transmitting the mail, click [Filter] button on [Alarm E-Mail] window.

FIGURE 3.11 Example of [Alarm E-Mail Filtering Condition] Window



2. Select required items. When multiple items are selected, each item is AND condition, when multiple options are selected in each item, it is OR condition.
3. Click [Apply] Button.

3.3.10 Registration of User Account

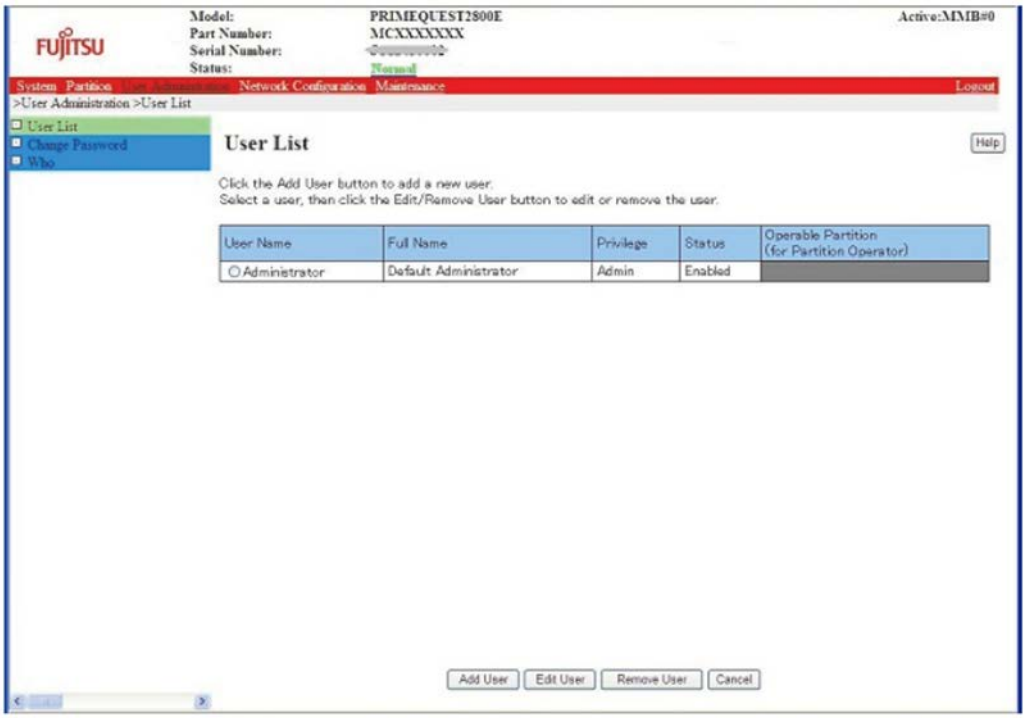
As an initial set up, user accounts of the required number are registered. The number of maximum registration is 16. Refer "3.5 Storage of the configuration information" for the backup of set up information.

Operations

1. Click [User Administration] [User List].

   → [User List] window is displayed. For details on [User List] window, see "1.4.1[User List] Window" of PRIMEQUEST 2000 serieS Tool Reference (CA92344-0539)

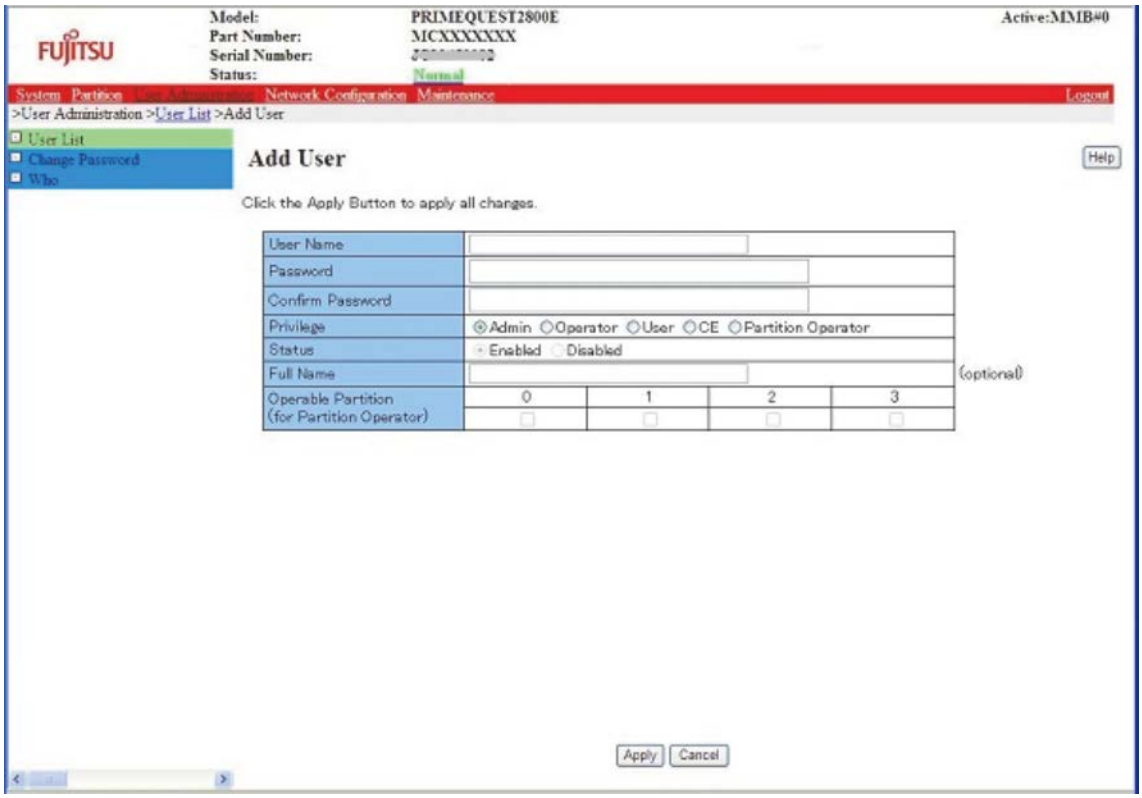
FIGURE 3.12 Example of [User List] Window



2. Click [Add User] button.

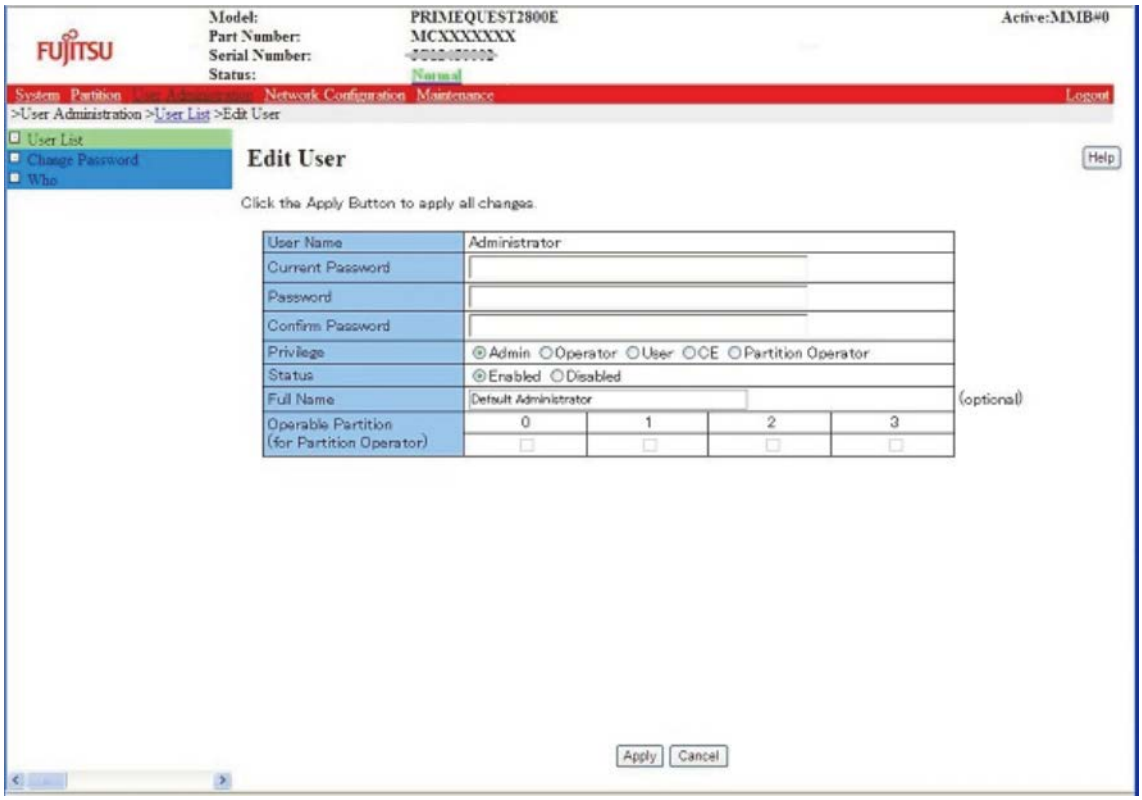
   → [Add User] window is displayed. For details on [Add User] window, see "■[Add User] Window" of "1.4.1[User List] Window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.13 Example of [Add User] Window



Remark
In case of changing the user count, click the [Edit User] button on the [User List] and change the recorded contents on the [Edit User] window.
For details of [Edit User] Window, see "■ [Edit User] Window" of "1.4.1 [User List] Window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.14 Example of [Edit User] Window



3. Input the required items.
4. Click [Apply] button.

3.3.11 Setting of System Name

Sets the name for system of PRIMEQUEST 2000 series. This name is used as SNMP [System Name].
For the backup of the set information, see"3.5 Storage of the configuration information".

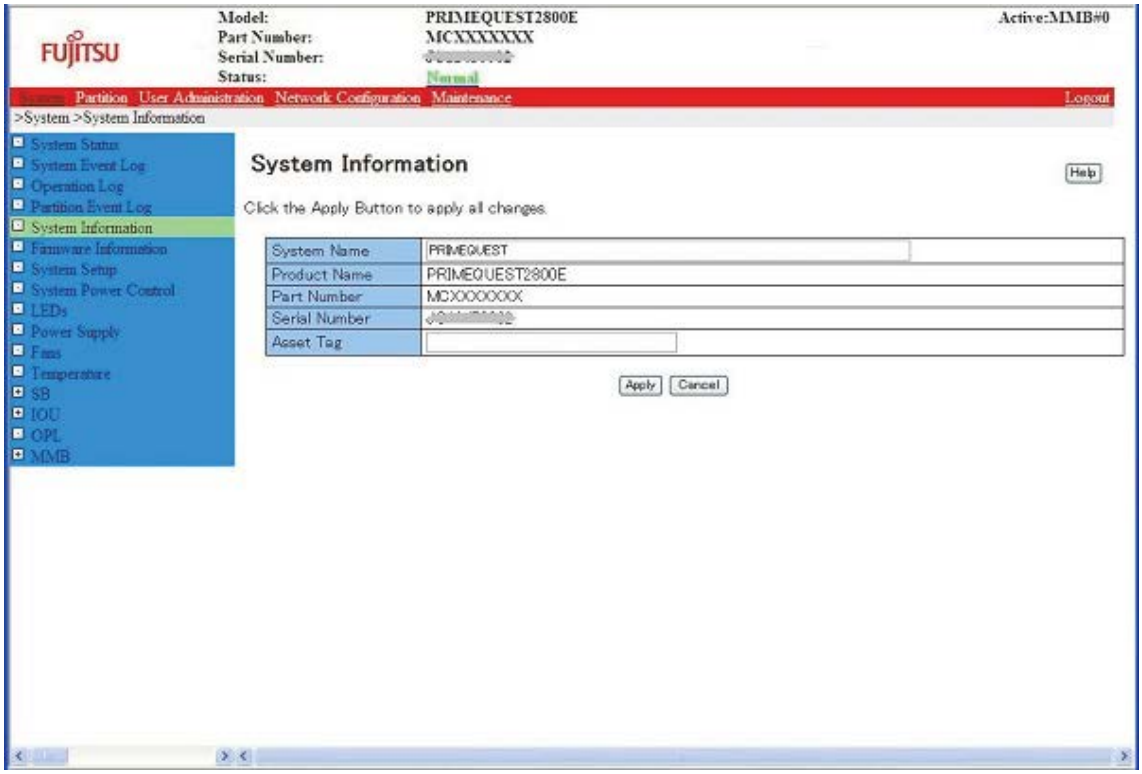
Operations

1. Click [System] - [System Information]

   → [System Information] window is displayed.

   For details on [System Information] window, see "1.2.5 [System Information] Window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.15 [System Information] Window Example



2. Enter [System Name].
3. Click [Apply] button.

3.3.12 Setting of Date and Time

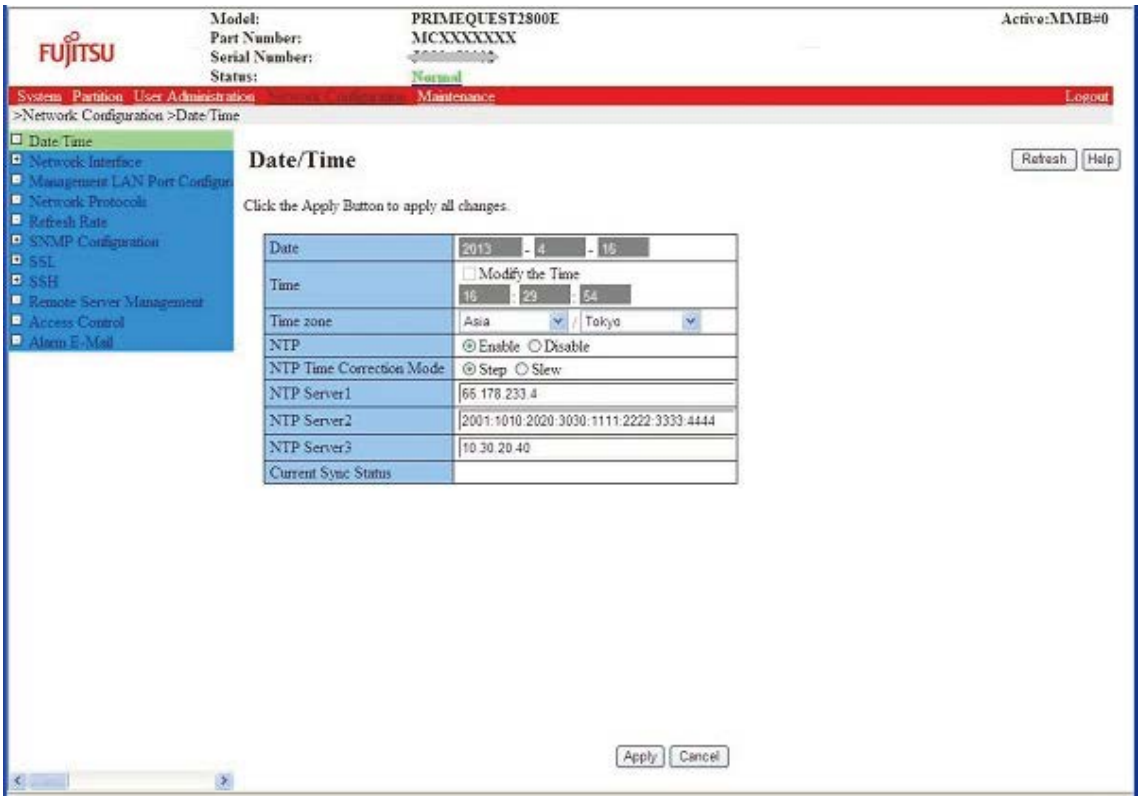
The date, time and NTP (In case of NTP server) of the MMB is set
However, occasionally it is already set by the field engineer. If it is already set by the field engineer and if it is not required to be changed, go to the next setting.
For the backup of the set information, see"3.5 Storage of the configuration information".

Remark
MMB provides NTP client function. The NTP client function of MMB adjusts the time on the basis of another NTP Server. For a stable NTP operation, specify multiple NTP Servers from each NTP client (In case of RHEL more than three servers are recommended).

Operations of [Date/ Time] window

1. Click [Network Configuration] - [Date/Time].
   → [Date /Time] window is displayed. For details on [Date /Time] window, see "1.5.1 [Date/Time] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.16 [Date/ Time] Window Example

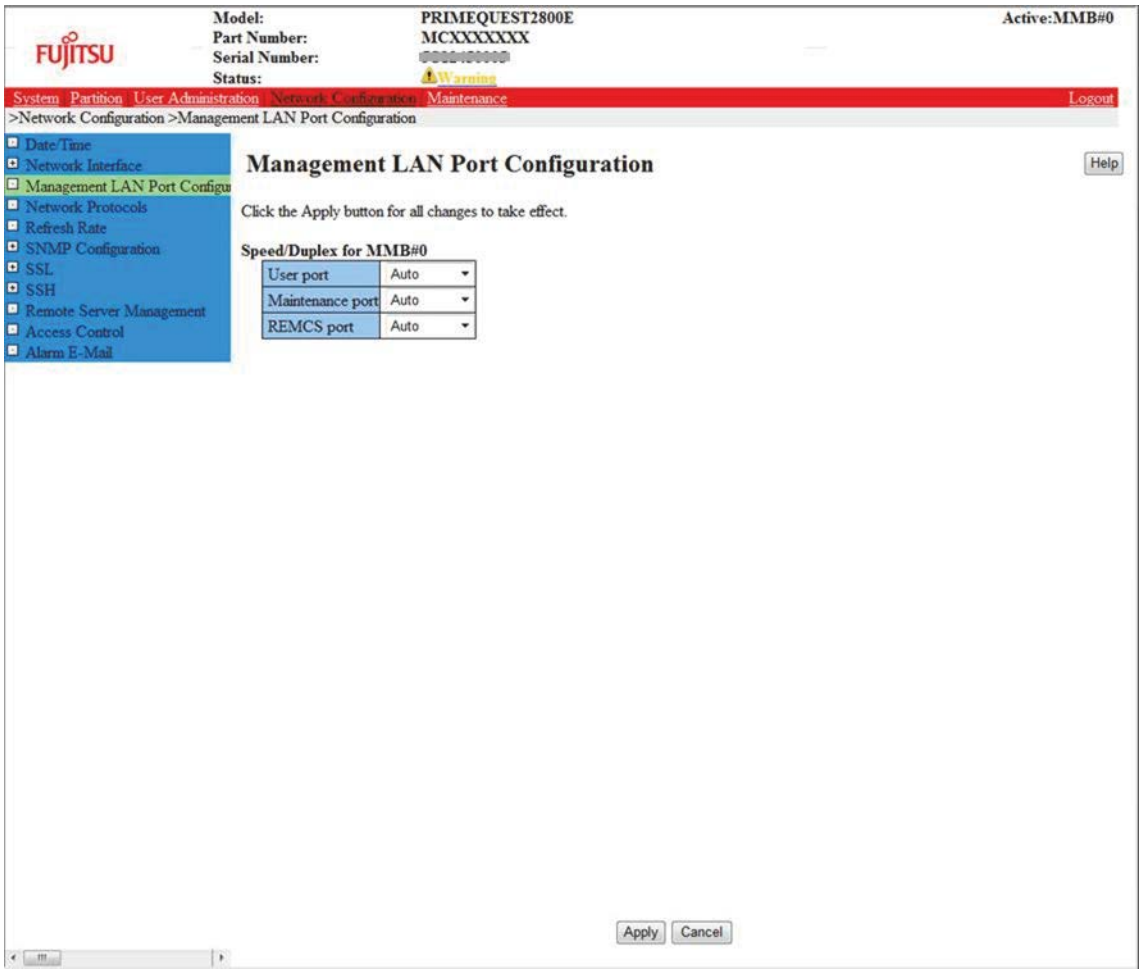


2. Input required items.
3. Click [Apply] Button.

Operations of [Management LAN Port Configuration]

1. Click [Network Configuration] - [Management LAN Port Configuration].
   → [Management LAN Port Configuration] window is displayed. For details of [Management LAN Port Configuration] window, see "1.5.3 [Management LAN Port Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.17 [Management LAN Port Configuration] Windows Example



2. Enter required items.
3. Click [Apply] Button.

3.4 Partition Configuration (Physical Partition)

This section describes partition configuration. PQ2400E and 2800E are available for these functions. Power off, power on for every partition is required to reflect the configuration change of partition. All screenshots are display examples. The displayed contents differ according to the system configuration.

3.4.1 Setting the partition configuration

This section describes addition and removal of operations of SB and IOU.

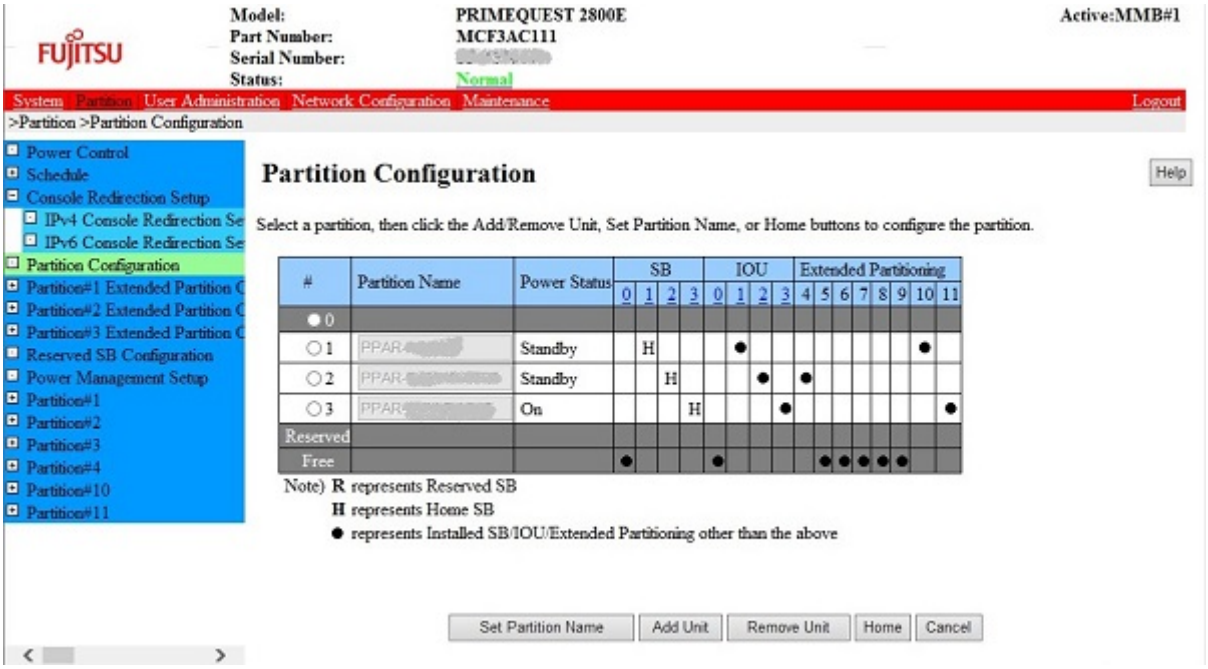
Adding of SB/IOU

SB and IOU can be added to the partition.

Operations

1. Click [Partition] - [Partition Configuration]
   → [Partition Configuration] window is displayed. For details of [Partition Configuration] window, see "1.3.3 Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

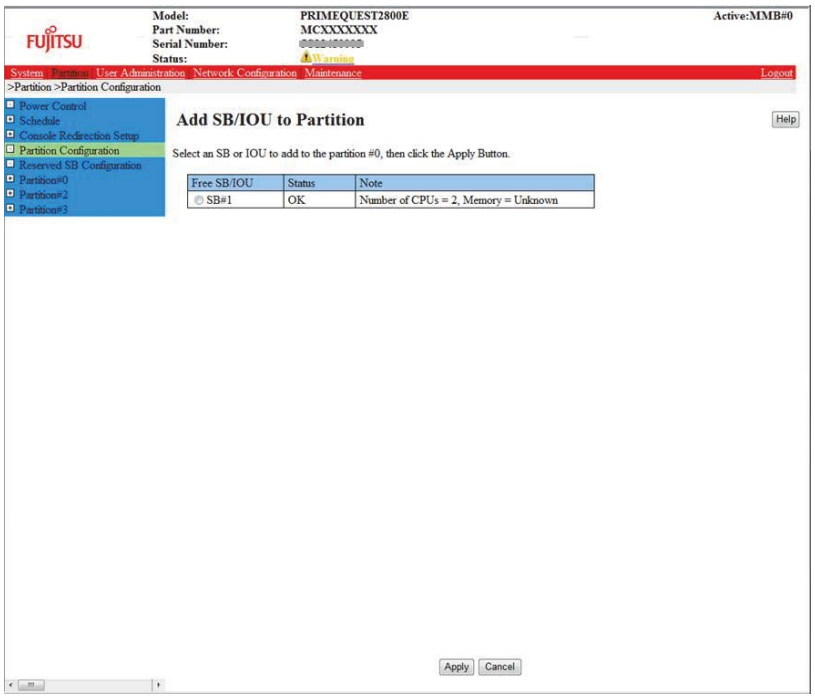
FIGURE 3.18 [Partition Configuration] Window Example (PQ2800E)



2. Click the radio button of partition number in which one SB or one IOU is added
3. Click [Add Unit] Button
   → [Add SB/IOU to Partition] window is displayed. Free SB and IOU are displayed in the list. For details of [Add SB/IOU to Partition] window, see "■ [Add SB/IOU to Partition] window] of "1.3.3 [Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

.

FIGURE 3.19 Example of [Add SB/IOU to Partition] Window



4. Click the radio button of one SB or one IOU to add it to the partition.
5. Only one SB or one IOU can be selected by one operation.
6. Click the [Apply] button.

   →Confirmation dialogue box is displayed.
7. Click [OK] button.

   →The selected one SB or one IOU is added in the partition.

   Repeat procedure 2~6 until you have added all the required SBs or IOUs.

Removing of SB and IOU

This section describes the method of removing the SB or IOU from the partition.

Remark

You cannot remove a SB or IOU while the operating system on the target partition is running. Remove the SB or IOU while the partition is in the POWER OFF status.

Operations

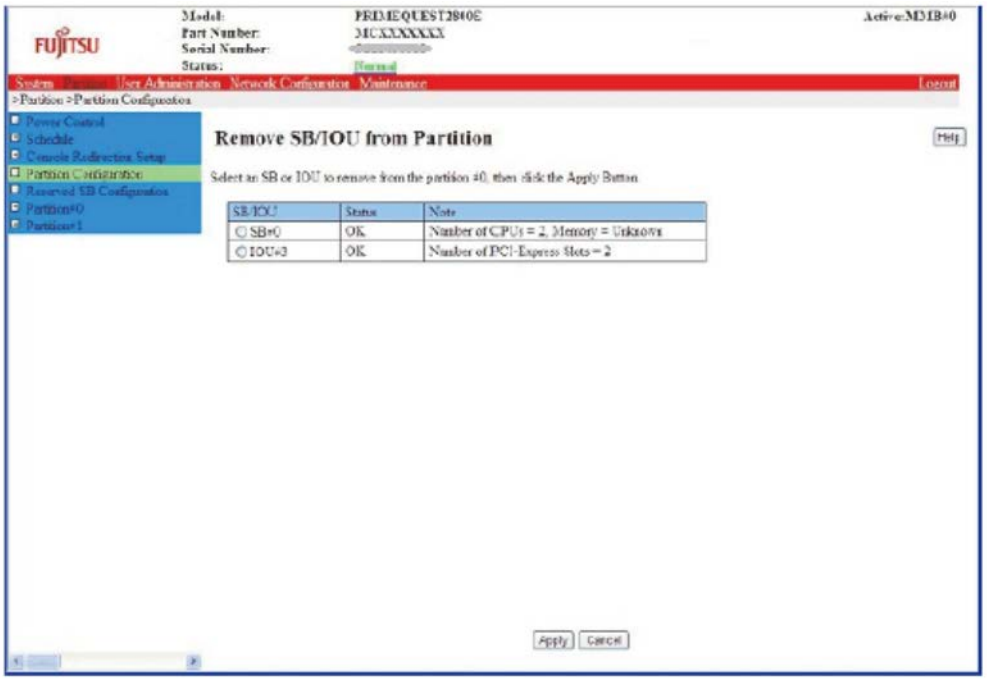
1. Click [Partition] - [Partition Configuration]

   → [Partition Configuration] window is displayed. For details of [Partition Configuration] window, see “1.3.3 Partition Configuration] window” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.20 [Partition Configuration] Window Example

2. Click the radio button of the partition number from which the SB/IOU is to be removed.
3. Click the [Remove Unit] button.
   →[Remove SB/IOU from Partition] window is displayed. SB and IOU are displayed in the list. The SB and IOU are incorporated in the partition that is selected by procedure 2.
   For details of [Remove SB/IOU from Partition] window, see "■[[Remove SB/IOU from Partition] window] of "1.3.3 [Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.21 Example of [Remove SB/IOU from Partition] Window



4. Click the radio button of one SB or one IOU which is to be removed from the partition.

   → Only one SB or one IOU can be selected by one operation.

5. Click the [Apply] button.

   → A confirmation dialogue box is displayed.

6. Click [OK] button.

   →The selected one SB or one IOU is removed from the partition and is free.

3.4.2 Setting the Home SB

One SB in each partition is set as the Home SB. The SB that is initially added in every partition is automatically set as Home SB.
Moreover when Home SB is removed, the SB having the smallest number among the SB that configures the partition and which is not degraded is automatically set as Home SB.
In Home SB, the USB port and the VGA port can be used as external connectors.
When the Home SB has to be changed, it is specified by Web-UI. For details of Home SB, see “5.9 Home SB” of PRIMEQUEST 2000 series Product Description (CA92344-0534).

Remark
The Windows license needs to be verified depending on the integration of the SB and the enable kit. For details, see “■ License verification based on the integration of SB and enabling kit” of “3.4 component expansion” of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

Operations

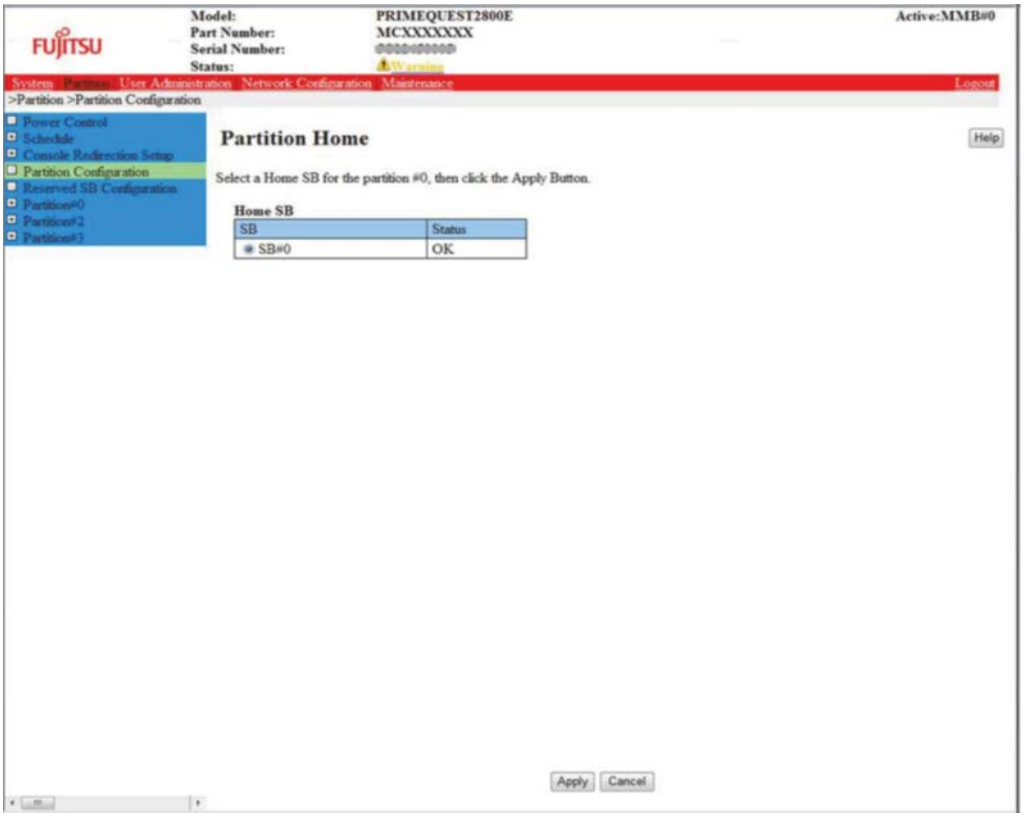
1. Click [Partition] - [Partition Configuration] - [Home]

   → [Partition Home] window is displayed. For details of [Partition Home] window, see “▪[Partition Home] window” of “1.3.3 [Partition Configuration] window” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539)

   Remark

If there is more than one partition, select the partition by checking to radio button in [Partition Configuration] window.

FIGURE 3.22 Example of [Partition Home] Window



2. Selecting a SB as the Home SB for the partition.
3. Click the radio button for the selected Home SB.

Remark

As long as SB is set as Home even if it is not mounted, it is displayed as gray out. The radio button on the row which is shown as grayed out can be changed to the radio button on the row which is not shown as grayed out. Once the radio button is disabled from gray out display, the original radio button cannot be selected again.

4. Click [Apply] button.
   → A confirmation dialogue box is displayed.

Note.

At the time of clicking the [Apply] button, if the power supply for the partition has been turned on, Home cannot be changed. A warning dialogue box is displayed.

5. Click [OK] button to continue the process, click [Cancel] button to cancel the process.
   →Returns to [Partition Configuration] window.

3.4.3 Setting of Reserved SB

If hardware failure occurs in the SB which is added in the partition and it may be necessary to remove the SB. Reserved SB is an SB which is newly added in the partition instead of removal of SB.
To configure Reserved SB in partition, following points should be considered. SB which is not added in the specified partition can be defined as Reserved SB.
The following SB is not added in the partition.

- SB in free status
- SB added in other partitions
- SB defined in Reserved SB of other partitions

For details of Reserved SB, see “3.2.3 Reserved SB” of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

Remark

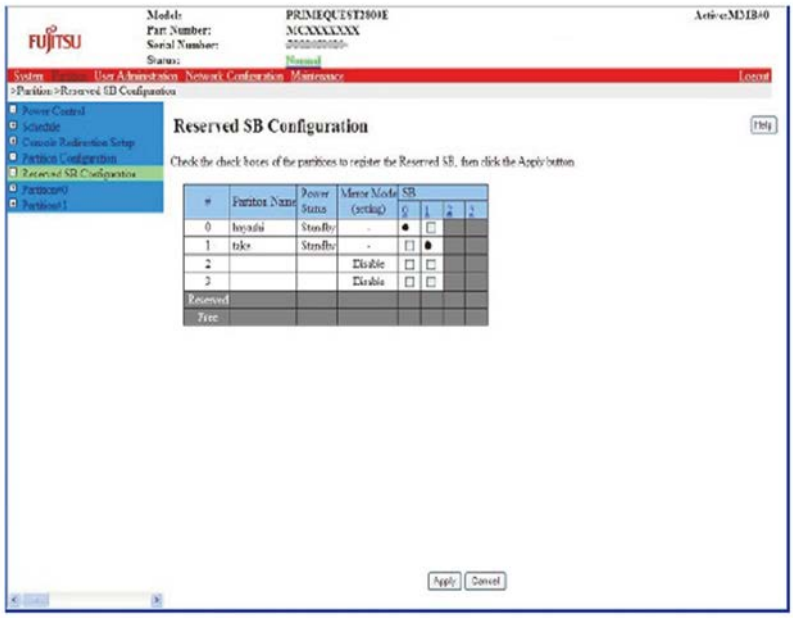
- Flexible I/O mode configuration is required to implement the Reserved SB.
- Windows license verification is required depending on the combination of SB and enables kit. For details “■Activation depending on the combination of SB and enable kit” of “3.4 Component extension” of PRIMEQUEST 2000sSeries Administration Manual (CA92344-0537).

Operations

1. Click [Partition]-[Reserved SB Configuration]

   → [Reserved SB Configuration] window is displayed. Check box is displayed vertically in the free status SB column or the column of SB which is defined as Reserved SB. For details of [Reserved SB Configuration] window, see “1.3.5 [Reserved SB Configuration] window” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.23 Example of [Reserved SB Configuration] Window



2. Check the checkbox of the partition to be reserved in SB column.
3. Click [Apply] button.

Remark

Uncheck the checkbox on [Reserved SB Configuration] window to free the reserved SB.

Reserved SB configuration conditions

Reserved SB has following conditions.
- Reserved SB cannot be configured in the partition that uses TPM functions.
- An SB installed with 32GB DIMM cannot be configured on a Reserved SB of the partition, which is configured on the SB installed with memory having various capacities (8GB, 16GB, 64GB DIMM).
- An SB with 64GB DIMM cannot be configured on an Reserved SB of the partition which is configured on the SB installed with memory having various capacities (8GB, 16GB, 32GB DIMM).

If the above mentioned mounting conditions are not fulfilled, a message dialogue box of “Unable to register the specified SB#x as a Reserved SB due to the home SB is TPM enabled.” would be displayed and the Reserved SB configuration would be prevented.

Memory Operation Mode may be changed after switch over of faulty SB to Reserved SB if:
- Reserved SB is configured for partition of one SB, and
- The Reserved SB does not fulfill requirements for Memory Operation Mode

In that case, a confirmation dialogue box of “The DIMM does not satisfy requirements of the Mirror Mode. If you register the specified SB%s as a Reserved SB, the Mirror Mode will be disabled when switching to specified SB. Are you sure to continue?[Y/N]” would be displayed when configuring the Reserved SB. Reserved SB for partition of multiple SB must follows conditions below. This is applicable for PRIMEQUEST 2800E.
- Mount two CPUs for Reserved SB of the partition.
- Reserved SB fulfills Memory Operation Mode requirements same as switching source partition.
- Mount the same type of CPU with the SB that configures partition for Reserved SB.

If the above mounting conditions are not fulfilled, a message dialogue box of “Unable to register the specified SB#x as a Reserved SB because the DIMM does not satisfy requirements of Mirror Mode.” is displayed and Reserved SB configuration would be prevented.

Points to be considered for Windows

When switching to Reserved SB in the partition operating on Windows,, Windows operating system is not activated at the time of initial start-up after switching to Reserved SB.
Configure the Reserved SB in partition operated by Windows so that Windows can be configured automatically.
For configuration details, see “11.4.3 Settings of Dump environment (Windows)” of PRIMEQUEST 2000 series Administration Manual (CA92344-0537). Turn on the [Start-up automatically] check box of [Start-up and recover] dialogue box.
Consider the time required for reactivation, when the operation is stopped during SB failure resulting from the above mentioned reasons.
Total 2 times are required for reactivation at the time of initial start-up and switching to Reserved SB.
However, if below mentioned prevention procedure is executed, reactivation request can be controlled.

Windows re-start prevention procedure

The request of reactivation can be controlled by recognizing Reserved SB to the PRIMEQUEST 2000 series in advance.
Execute the following procedures for all Windows partitions.
If this prevention procedure is executed, reactivation is not demanded, when switched to Reserved SB due to SB failure.

1. Shut down the partition after completing Windows installation.
2. One SB is removed from the partition by using MMB Web-UI. When multiple SBs are installed, any one out of them can be removed.
3. Add SB for Reserved SB to the partition.

   For details, see “▪ Built in SB and IOU” of “3.4.1 Setting the partition configuration”.
4. Turn on the power supply of partition and start the Windows.
5. Login by Administrator privileges‘. Reactivate according to the instructions, if the message requesting the reactivation is displayed.
6. Shut down after Windows is reactivated.
7. Remove the SB for Reserved SB, which was added in procedure 3, from the partition by using MMB Web-UI.
8. Add SB removed from procedure 2 to the partition.

Points to be considered for VMware

When switched to Reserved SB by the partition wherein ESX is in operation, the guest operating system may not be activated at the time of the initial start after switching to the Reserved SB.
Set the items of automatic activation of guest operating system and BlueScreenTimeout while configuring the Reserved SB in the partition wherein ESX is in operation.
For example, to reset the items 20 seconds after a panic occurs in the ESX host, set “20” to BlueScreenTimeout.

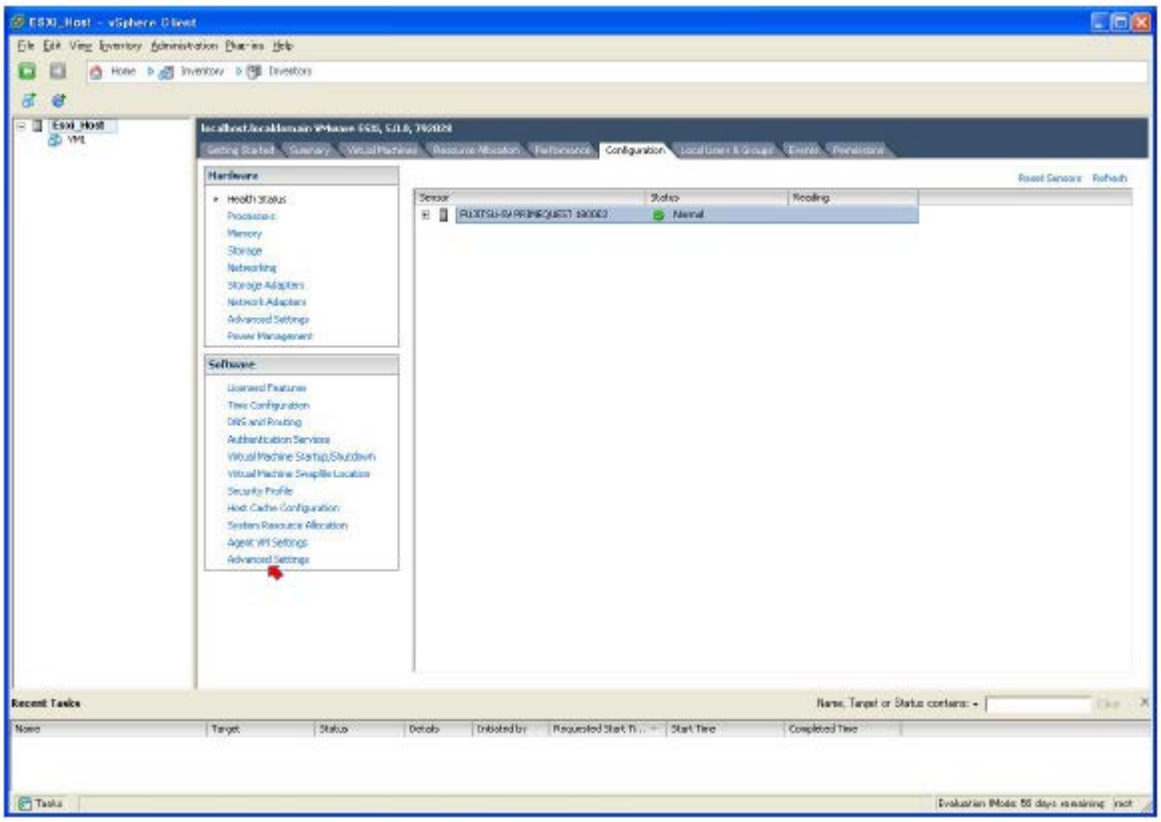
Remark
If items are not reset, when ESX host becomes panic, set “0” to BlueScreenTimeout.

Setting method of BlueScreenTimeout

Execute BlueScreenTimeout settings from vSphere Client.

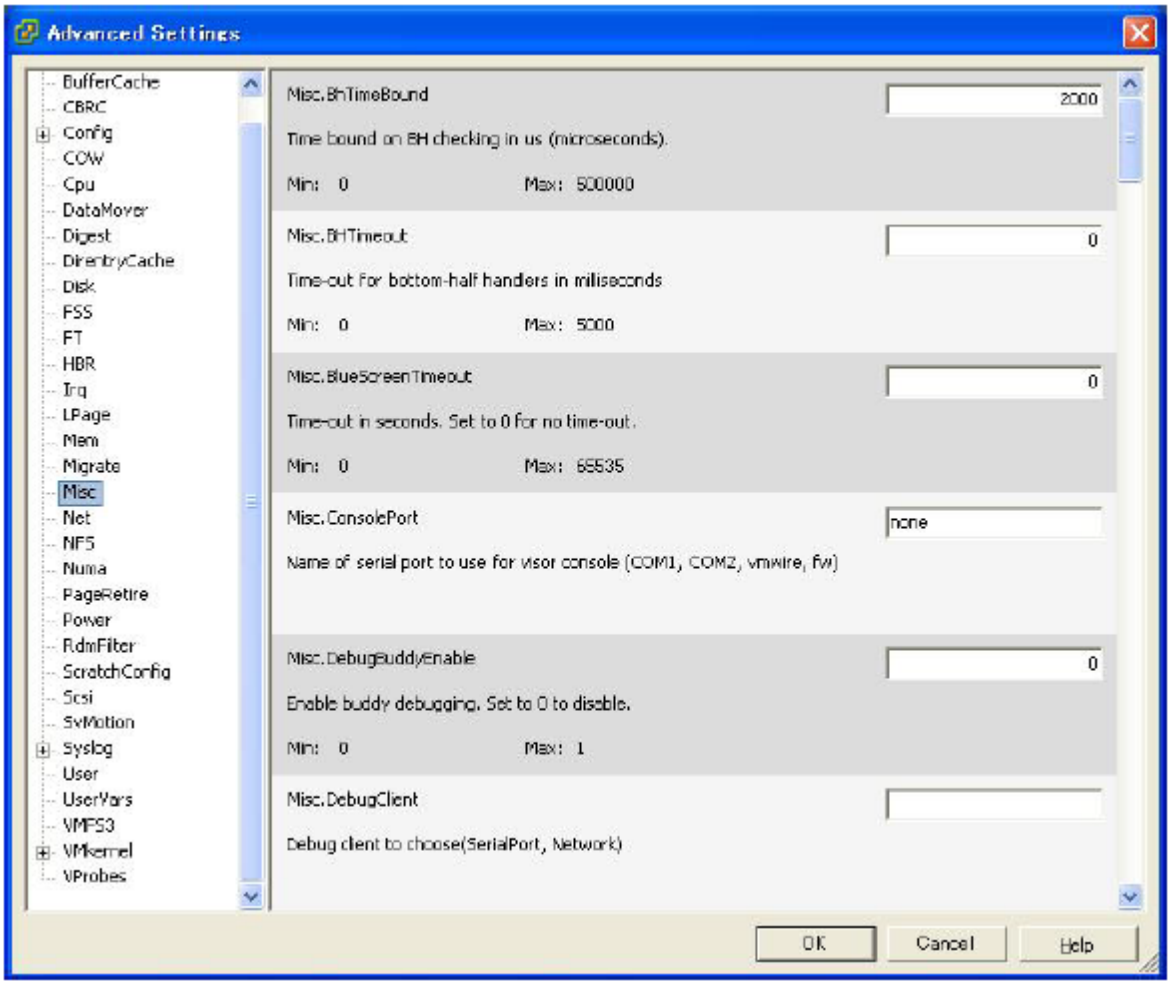
1. [Configuration] tab of host is opened on vSphere Client. Click [Detailed settings] of [Software] column.

FIGURE 3.24 Settings of BlueScreenTimeout ([Configuration] tab)



2. [Detailed settings] window is opened. Click [Misc] in left side column.
3. Each parameter is displayed in right side frame. BlueScreenTimeout value is set to [Misc. BlueScreenTimeout].

FIGURE 3.25 Settings of BlueScreenTimeout (Settings of [Misc])



For details on vSphere Client, see the manual of VMware.

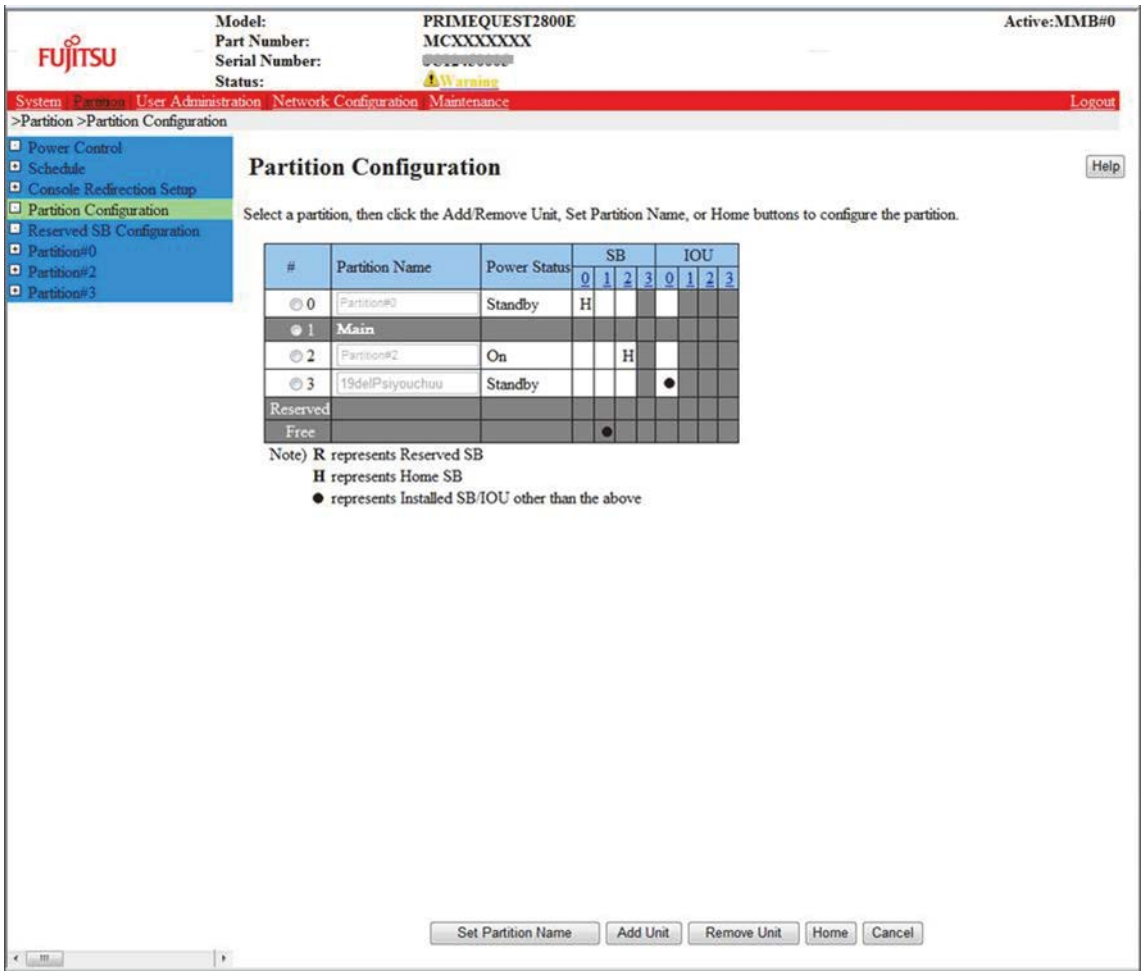
3.4.4 Partition name settings

Administrator privileges are required to set partition name. Fujitsu recommends using host name for partition name.

Operations

1. Click [Partition]-[Partition Configuration]

FIGURE 3.26 Example of [Partition Configuration] Window


Model: PRIMEQUEST2800E
Part Number: MCXXXXXXX
Serial Number:
Status: Warning
Active:MMB#0
System | Partition | User Administration | Network Configuration | Maintenance | Logout
>Partition >Partition Configuration
Power Control
Schedule
Console Redirection Setup
Partition Configuration
Reserved SB Configuration
Partition#0
Partition#2
Partition#3
Partition Configuration
Help
Select a partition, then click the Add/Remove Unit, Set Partition Name, or Home buttons to configure the partition.
| Partition Name | Power Status | SB 0 1 2 3 | IOU 0 1 2 3
0 | Partition#0 | Standby | H
1 | Main
2 | Partition#2 | On | H
3 | 19delPsiyouchuu | Standby | ●
Reserved
Free | ●
Note) R represents Reserved SB
H represents Home SB
● represents Installed SB/IOU other than the above
Set Partition Name
Add Unit
Remove Unit
Home
Cancel

2. Select partition which sets the partition name and enter the partition name in [Partition name] cell.

   Remark
   The name can be input up to 16 characters. The characters that can be used are as follows.
   [0-9], [a-z], [A-Z], half-width space, # (Sharp), _ (Underline), and – (Hyphen)

3. Click [Set Partition Name] button.
   → Name is set for the selected partition.

3.4.5 Various mode settings

Dynamic Reconfiguration, Memory operation mode, and Hyper Threading Mode, etc. of the partition are set. Setting items are set by MMB Web-UI and UEFI. Following table lists the setting items and screen transition.
For details on the respective settings, see PRIMEQUEST 2000 series Tool Reference (CA92344-0539)

TABLE 3.7 Setting of Various modes

Setting item	Screen transition	Refer to[PRIMEQUEST 2000 series Tool Reference] (CA92344-0539)
Memory Operation Mode	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
Memory Mirror RAS Mode	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
PCI Address Mode	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
Dynamic Reconfiguration	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
On board LAN Mode	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
Assignment of I/O space	UEFI-[Device Manager]-[I/O Space Assignment Configuration]	3.4.4.2[I/O Space Assignment Configuration] Menu
Hyper-threading	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
CPU Active Cores	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Hardware Prefetcher	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Adjacent Cache Line Prefetch	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
DCU Steamer Prefetcher	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
DCU Ip Prefetcher	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Execute Disable Bit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Intel Virtualization Technology	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Intel (R) VT-d	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Power Technology (*3)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Enhanced SpeedStep (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Turbo Mode (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Energy Performance	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
P-State Coordination	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
CPU C3 Report	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
CPU C6 report	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
CPU C7report	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Package C State limit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
QPI Link Frequency Select	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Frequency Floor Override	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Perfmon and DFX devices	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Commit Changes and Exit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Discard Changes and Exit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu

Note

- Confirm the I/O space is allocated in the SAS device (SAS card, RAID card, RAID card in DU or RAID card in SB) of a relevant partition.
  Further, also confirm the allocation of the I/O space to the FC card, onboard LAN and LAN Card (Only the card for the boot passing), while installing on the SAN storage device.
  SAS device is displayed as “Device: SAS", and the FC device is displayed as “Device: Fibre". When I/O space is not allocated, operate [I/O Space Assignment Configuration] menu and remove the allocation of LAN and fibre channel.
  However, do not remove the allocation of I/O space for the FC card onboard LAN and LAN Card used for installation, when the operating system is installed for the storage in SAN environment.
- Confirm whether the Boot device used in the relevant partition is recognized in the UEFI. For confirmation, see "3.3[Boot Manager] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539). Identify the Boot device by operating the [Boot Manager] menu when the Boot device is not recognized by the UEFI.
- A confirmation dialog box is displayed, When the DIMM configuration mismatches Reserved SB and the partition,. When switched to Reserved SB, warning message containing the reasons for releasing Memory Operation Mode is shown and confirm whether to continue the settings.

For details on [Mode] window, see “■ [Mode] window” of “1.3.8 [Partition#x] menu” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

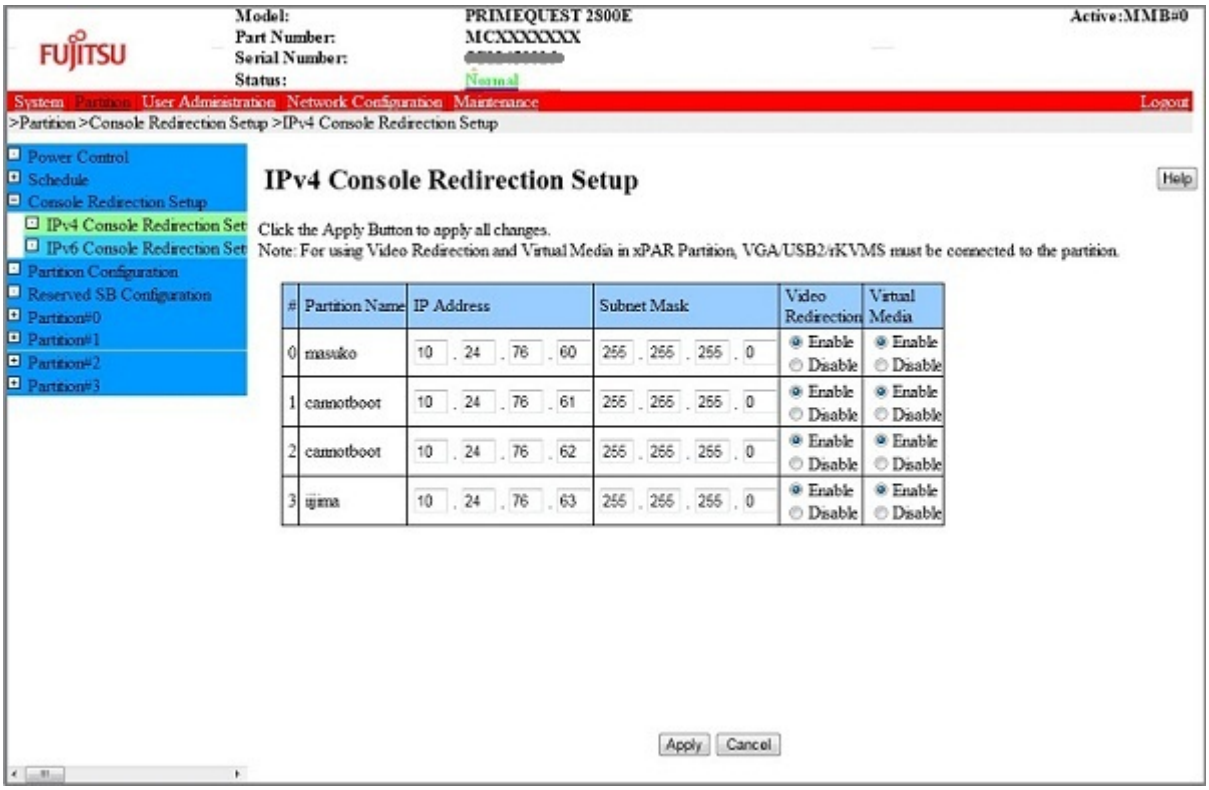
3.4.6 Settings of Console Redirection

When operating system is installed remotely, it is necessary to set Console Redirection. Set the Console Redirection to the subnet same as management LAN.

[IPv4 Console Redirection Setup] window

1. Click [Partition] - [Console Redirection Setup] - [IPv4 Console Redirection Setup] window.
   → [IPv4 Console Redirection Setup] window is displayed. For details on window, see "1.3.3 [Console Redirection Setup] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.27 Example of [IPv4 Console Redirection Setup] Window


Model: PRIMEQUEST 2800E
Part Number: MCXXXXXXX
Serial Number:
Status: Normal
Active:MMB#0
System Partition User Administration Network Configuration Maintenance Logout
>Partition >Console Redirection Setup >IPv4 Console Redirection Setup
Power Control
Schedule
Console Redirection Setup
IPv4 Console Redirection Set
IPv6 Console Redirection Set
Partition Configuration
Reserved SB Configuration
Partition#0
Partition#1
Partition#2
Partition#3
IPv4 Console Redirection Setup
Help
Click the Apply Button to apply all changes.
Note: For using Video Redirection and Virtual Media in xPAR Partition, VGA/USB2/rKVMS must be connected to the partition.
Partition Name IP Address Subnet Mask Video Redirection Virtual Media
0 masuko 10 . 24 . 76 . 60 255 . 255 . 255 . 0 Enable Disable Enable Disable
1 cannotboot 10 . 24 . 76 . 61 255 . 255 . 255 . 0 Enable Disable Enable Disable
2 cannotboot 10 . 24 . 76 . 62 255 . 255 . 255 . 0 Enable Disable Enable Disable
3 ijima 10 . 24 . 76 . 63 255 . 255 . 255 . 0 Enable Disable Enable Disable
Apply Cancel

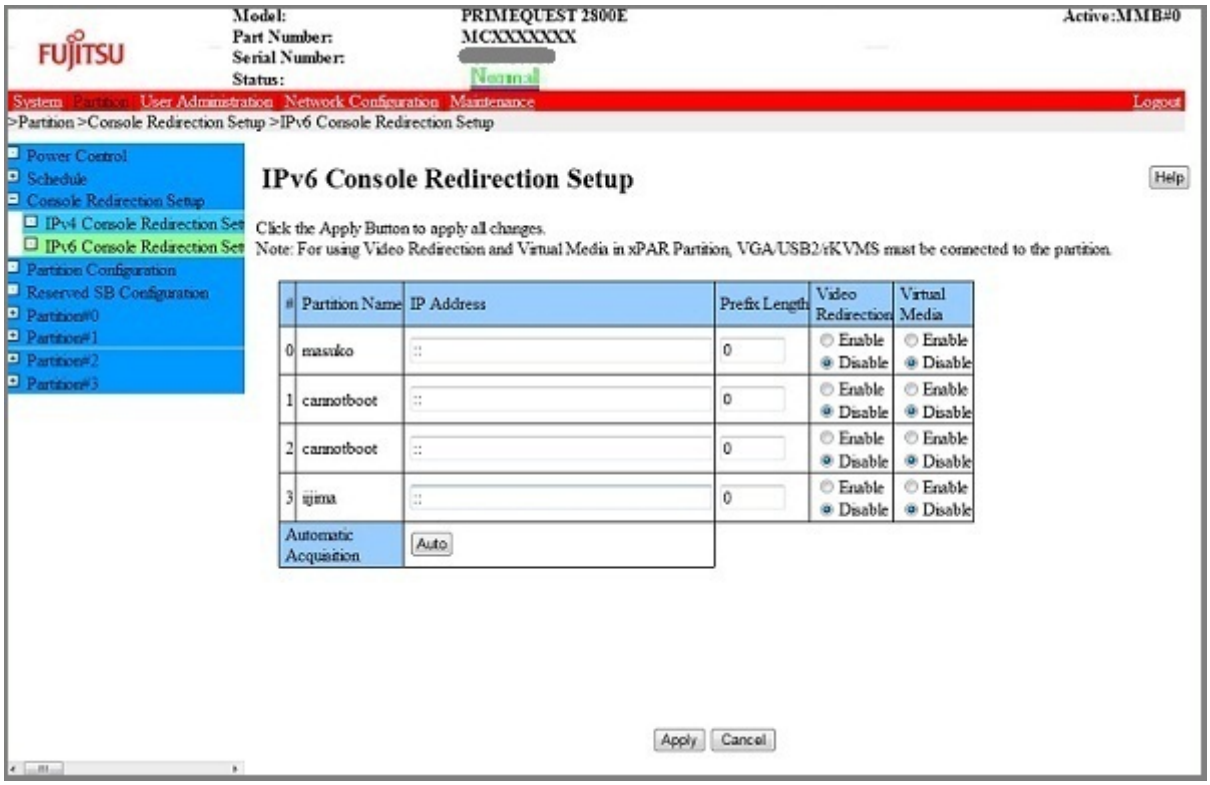
2. Set IP address and subnet mask to access Console Redirection LAN for IPv4
3. Enable video redirection and virtual media respectively.
4. Click [Apply] button.

Note
After installation, disable the functions not used.

[IPv6 Console Redirection Setup] window

1. Click [Partition] - [Console Redirection Setup] - [IPv6 Console Redirection Setup] window.
   → [IPv6 Console Redirection Setup] window is displayed. For details on window, see "1.3.3 [Console Redirection Setup] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.28 Example of [IPv6 Console Redirection Setup] Window


Model: PRIMEQUEST 2800E
Part Number: MCXXXXXXX
Serial Number:
Status: Normal
Active:MMB#0
System Partition User Administration Network Configuration Maintenance Logout
>Partition >Console Redirection Setup >IPv6 Console Redirection Setup
Power Control
Schedule
Console Redirection Setup
IPv4 Console Redirection Set
IPv6 Console Redirection Set
Partition Configuration
Reserved SB Configuration
Partition#0
Partition#1
Partition#2
Partition#3
IPv6 Console Redirection Setup
Help
Click the Apply Button to apply all changes.
Note: For using Video Redirection and Virtual Media in xPAR Partition, VGA/USB2/rKVMS must be connected to the partition.
Partition Name IP Address Prefix Length Video Redirection Virtual Media
0 masuko :: 0 Enable Disable Enable Disable
1 cannotboot :: 0 Enable Disable Enable Disable
2 cannotboot :: 0 Enable Disable Enable Disable
3 ijima :: 0 Enable Disable Enable Disable
Automatic Acquisition Auto
Apply Cancel

2. Set IP address and the prefix length to access Console Redirection LAN for IPv6. When it is set automatically, IP address and the prefix length is acquired by clicking on [Auto] button.
3. Enable video redirection and virtual media respectively.
4. Click [Apply] button.

3.4.7 Power OFF and ON of the partition

Power OFF and power ON are required for each partition to reflect the configuration change in the partition. For the details of Power OFF and power ON, see "CHAPTER 7Power ON and OFF of the partition".

Remark
When the console is connected to the partition, processing continues until [UEFI] window is displayed after completion of POST (Power On Self Test) and then it stops.

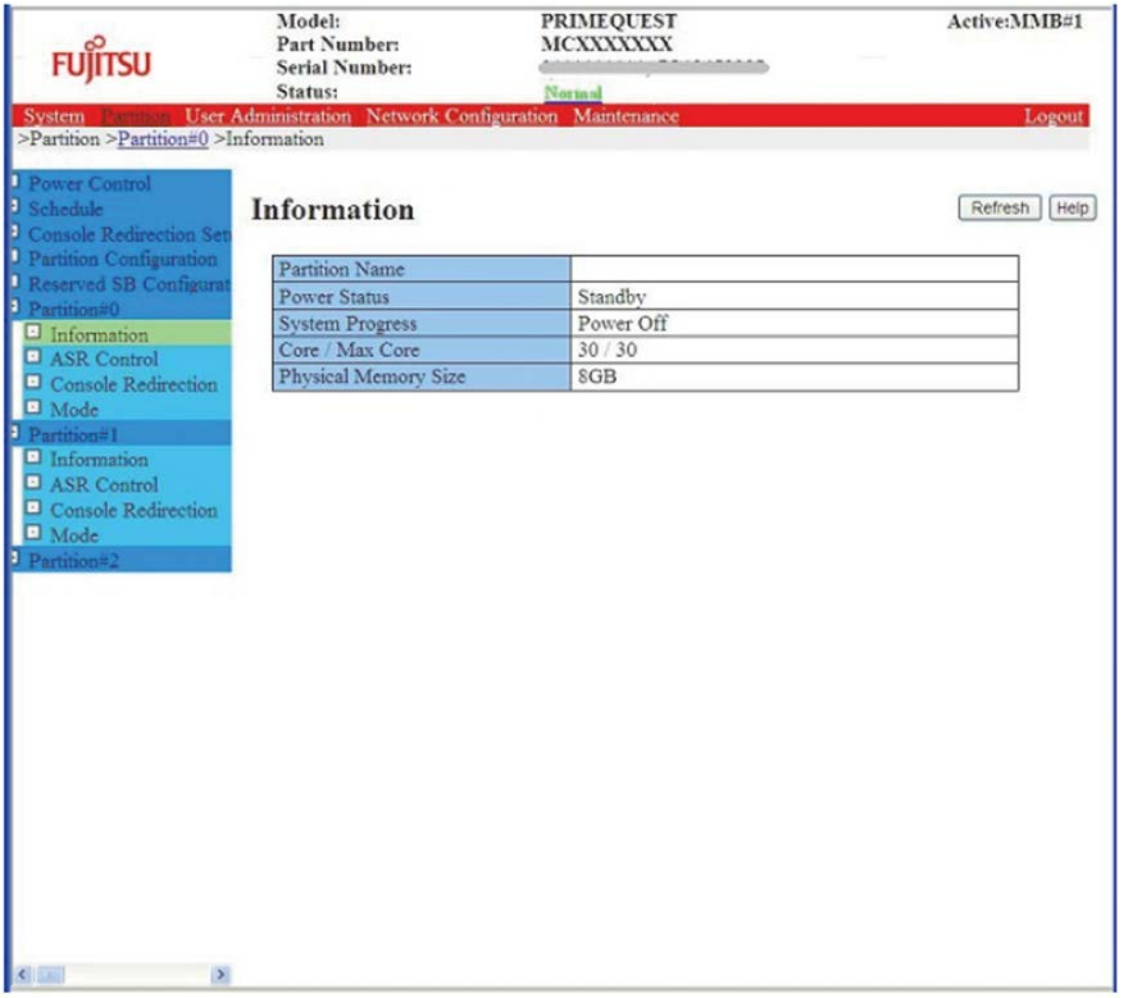
3.4.8 Confirmation of partition information

The status of the partition and the partition related information is displayed.
The partition configuration of the entire system of PRIMEQUEST 2000 series can be confirmed even by the [Partition Configuration] window.

Operations

1. Click [Partition]-[Partition#x]-[Information].
   →[Information] window is displayed. For details on [Information] window, see "■ [Information] window" of "1.3.8 [Partition#x] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.29 Example of [Information] Window



3.5 Partition Configuration (Extended Partitioning)

Extended Partitioning function can be used and a physical partition be divided into two or more partitions. Each partition that is divided by using the Extended Partitioning function is expressed as the Extended Partition.
This section describes the setting of Extended Partition configuration.

It is necessary to have completed the configuration setting of a physical partition that is divided by the Extended Partitioning function before the setting of Extended Partition.

Remark

- PQ2400E and 2800E are available for this function.
- Power off, power on for every partition is required to reflect the configuration change of partition.
- Performance characteristics of the Extended Partition are different from the PPAR partition. Should be used after the performance verification prior.
- All screenshots are display examples. The displayed contents differ according to the system configuration.

3.5.1 Enabling the Extended Partitioning function

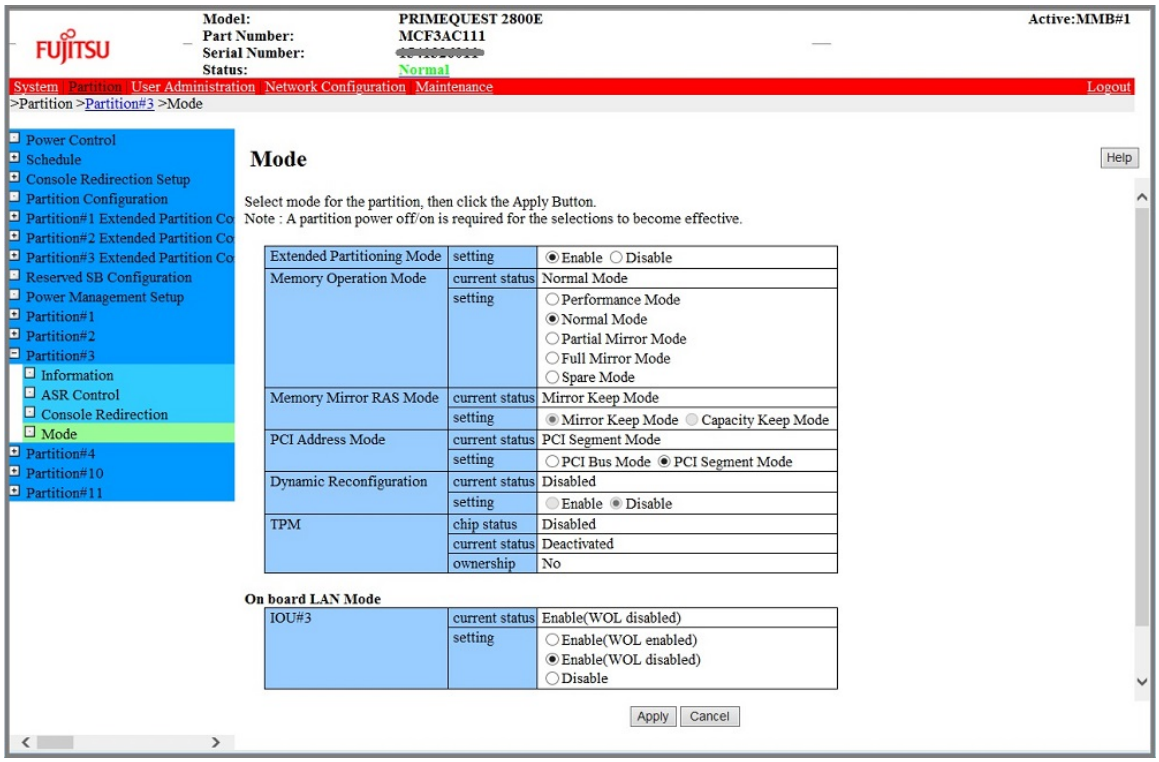
This section describes the operations of enabling the Extended Partitioning function.

Operations

1. Click [Partition] - [Partition#x] – [Mode]

   → [Mode] window is displayed. For details of [Mode] window, see PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.30 [Mode] Window Example


Model: PRIMEQUEST 2800E
Part Number: MCF3AC111
Serial Number:
Status: Normal
Active:MMB#1
System | Partition | User Administration | Network Configuration | Maintenance
Logout
>Partition >Partition#3 >Mode
Power Control
Schedule
Console Redirection Setup
Partition Configuration
Partition#1 Extended Partition Co
Partition#2 Extended Partition Co
Partition#3 Extended Partition Co
Reserved SB Configuration
Power Management Setup
Partition#1
Partition#2
Partition#3
Information
ASR Control
Console Redirection
Mode
Partition#4
Partition#10
Partition#11
Mode
Help
Select mode for the partition, then click the Apply Button.
Note : A partition power off/on is required for the selections to become effective.
Extended Partitioning Mode | setting | Enable Disable
Memory Operation Mode | current status | Normal Mode
setting | Performance Mode / Normal Mode / Partial Mirror Mode / Full Mirror Mode / Spare Mode
Memory Mirror RAS Mode | current status | Mirror Keep Mode
setting | Mirror Keep Mode Capacity Keep Mode
PCI Address Mode | current status | PCI Segment Mode
setting | PCI Bus Mode PCI Segment Mode
Dynamic Reconfiguration | current status | Disabled
setting | Enable Disable
TPM | chip status | Disabled
current status | Deactivated
ownership | No
On board LAN Mode
IOU#3 | current status | Enable(WOL disabled)
setting | Enable(WOL enabled) / Enable(WOL disabled) / Disable
Apply
Cancel

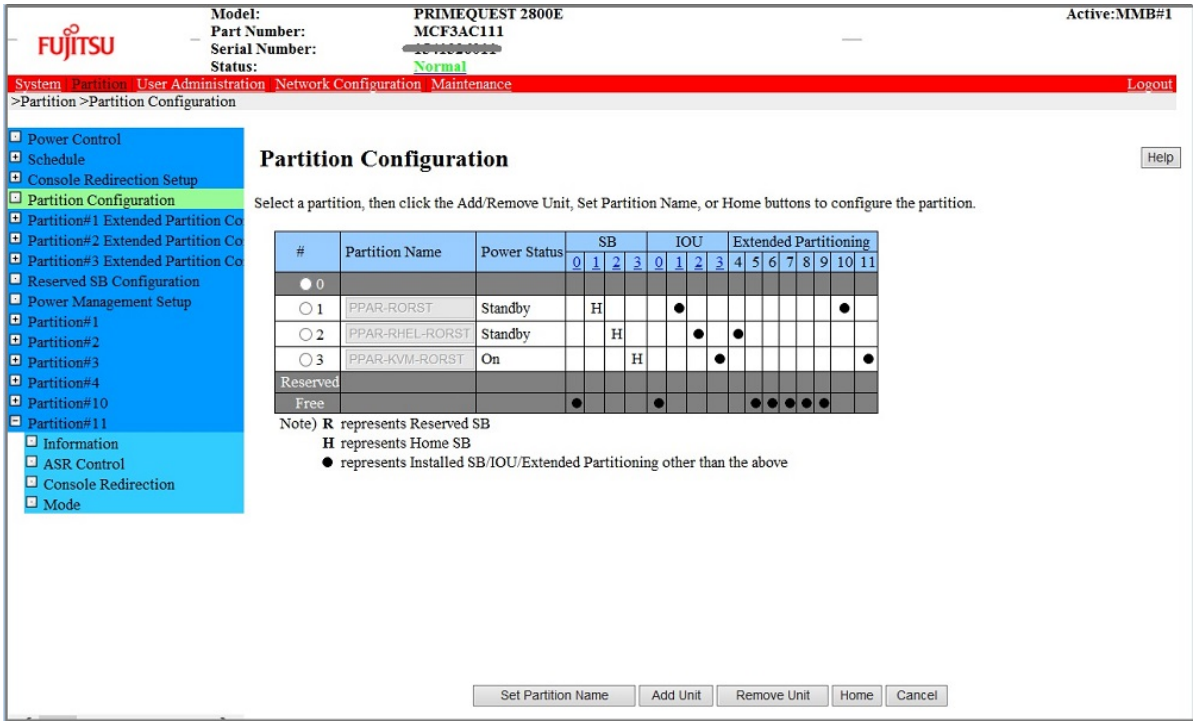
3.5.2 Generating the Extended Partition

This section describes generations of the Extended Partition.

Operations

1. Click [Partition] - [Partition Configuration]
   → [Partition Configuration] window is displayed. For details of [Partition Configuration] window, see "1.3.3 Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

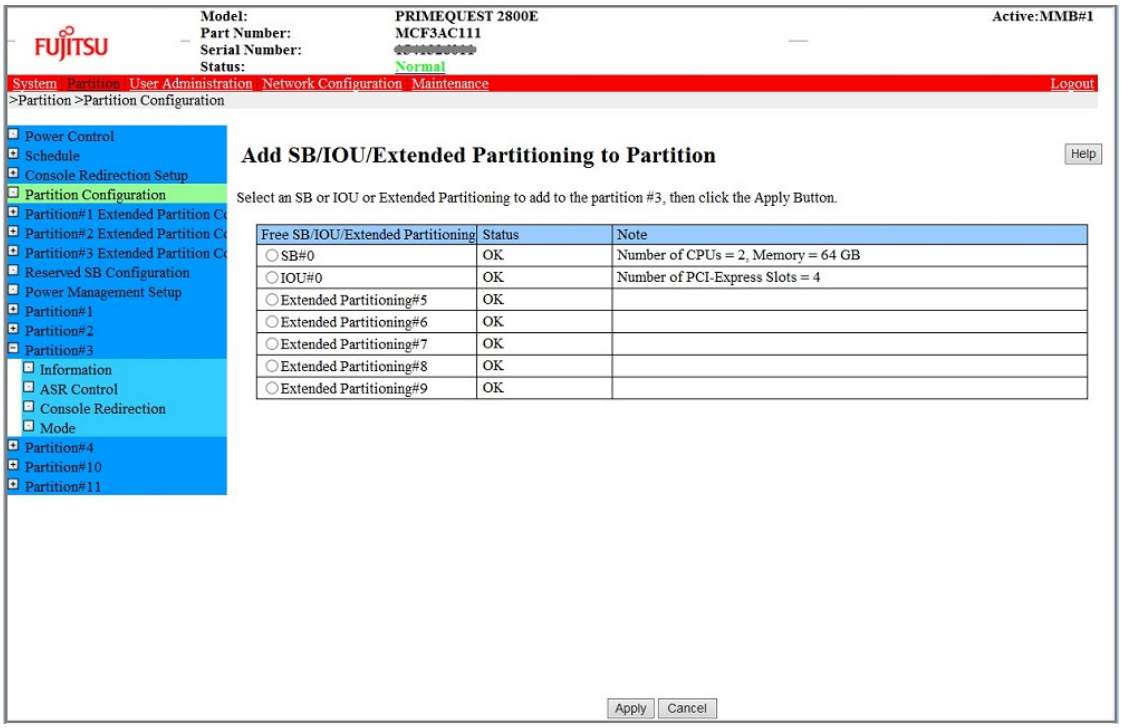
FIGURE 3.31 [Partition Configuration] Window Example



2. Click the radio button of partition number in which Extended Partition is generated
3. Click [Add SB/IOU] Button
   → [Add SB/IOU to Partition] window is displayed. Free SB, IOU and Extended Partition are displayed in the list. For details of [Add SB/IOU to Partition] window, see "■ [Add SB/IOU to Partition] window] of "1.3.3 [Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

.

FIGURE 3.32 Example of [Add SB/IOU to Partition] Window



4. Click the radio button of one Extended Partition in the physical partition.
   →Only one Extended Partition can be selected by one operation.
5. Click the [Apply] button.
   →Confirmation dialogue box is displayed.
6. Click [OK] button.
   →The selected one Extended Partition is generated in the physical partition.

   Repeat procedure 2~6 until you have generated all the required Extended Partitions.

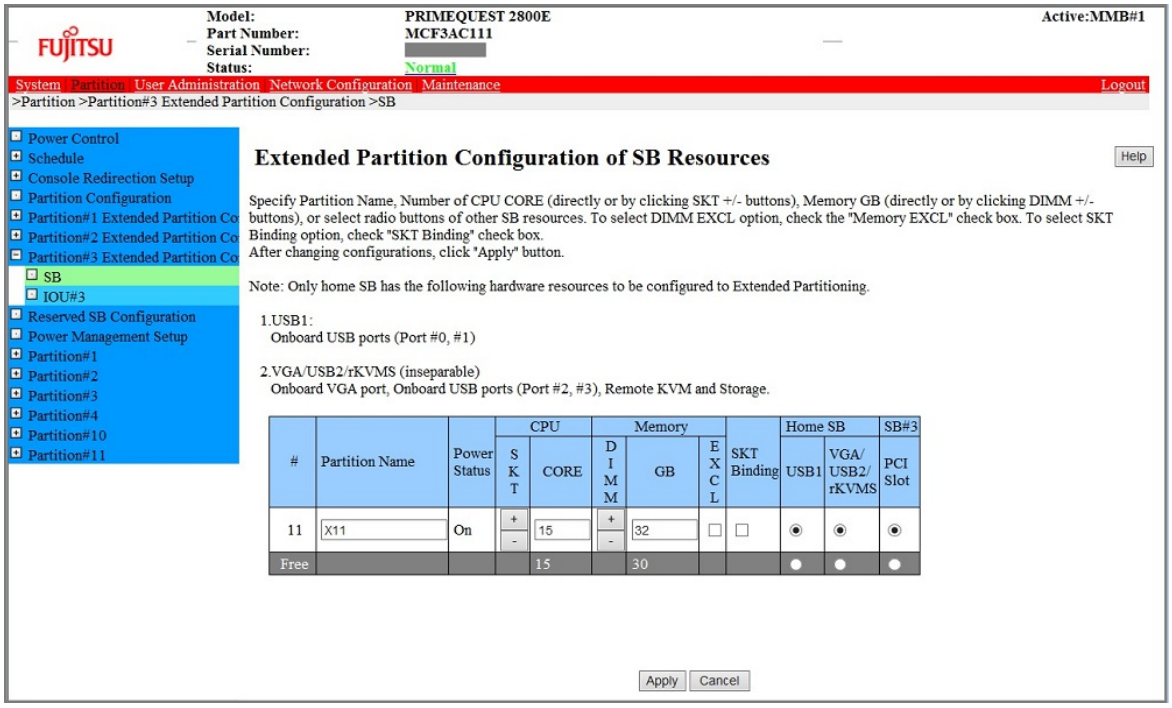
3.5.3 Assigning SB resources to Extended Partition

Resources on the SB assign the Extended Partition.

Operations

1. Click [Partition]-[Partition#x Extended Partition Configuration] - [SB]
   → [Extended Partition Configuration of SB Resources] window is displayed. For details of [Extended Partition Configuration of SB Resources] window, see "1.3.3 Partition#x Extended Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.33 Example of [Extended Partition Configuration of SB Resources] Window


Model: PRIMEQUEST 2800E
Part Number: MCF3AC111
Serial Number:
Status: Normal
Active:MMB#1
System Partition User Administration Network Configuration Maintenance Logout
>Partition >Partition#3 Extended Partition Configuration >SB
Power Control
Schedule
Console Redirection Setup
Partition Configuration
Partition#1 Extended Partition Co
Partition#2 Extended Partition Co
Partition#3 Extended Partition Co
SB
IOU#3
Reserved SB Configuration
Power Management Setup
Partition#1
Partition#2
Partition#3
Partition#4
Partition#10
Partition#11
Extended Partition Configuration of SB Resources
Help
Specify Partition Name, Number of CPU CORE (directly or by clicking SKT +/- buttons), Memory GB (directly or by clicking DIMM +/- buttons), or select radio buttons of other SB resources. To select DIMM EXCL option, check the "Memory EXCL" check box. To select SKT Binding option, check "SKT Binding" check box.
After changing configurations, click "Apply" button.
Note: Only home SB has the following hardware resources to be configured to Extended Partitioning.
1.USB1:
Onboard USB ports (Port #0, #1)
2.VGA/USB2/rKVMS (inseparable)
Onboard VGA port, Onboard USB ports (Port #2, #3), Remote KVM and Storage.
Partition Name Power Status CPU SKT CORE Memory DIMM GB EXCL SKT Binding Home SB USB1 VGA/USB2/rKVMS SB#3 PCI Slot
11 X11 On 15 32
Free 15 30
Apply Cancel

2. Sets the partition name.
   Enter the partition name in [Partition name] cell and click [Apply] Button.

   Remark
   The name can be input up to 16 characters. The characters that can be used are as follows.
   [0-9], [a-z], [A-Z], half-width space, # (Sharp), _ (Underline), and – (Hyphen)

3. Assign CPU resources to Extended Partition.
   Enter the number of assigning CPU Core in [CPU] - [CORE] cell of the Extended Partition and click [Apply] Button.

   Remark
   Clicking the [+/-] Button in [CPU] – [SKT] cell can be increased or decreased the number of specified core in one CPU socket unit.

4. Assign memory resources to Extended Partition.
   Enter the capacity of memory by one gigabyte in [Memory] - [GB] cell of the Extended Partition and click [Apply] Button.

   Note
   - Extended partition needs at least 4GB of memory capacity.

Remark
- Clicking the [+/-] Button in [Memory] – [DIMM] cell can be increased or decreased the number of specified memory capacity in one DIMM module unit.
- If the check box in [Memory] – [EXCL] cell of the Extended Partition is checked, all the physical DIMMs (DIMM modules) that used by the Extended Partition are not used other partition.
- If the check box in [Memory] – [EXCL] cell of the Extended Partition is checked, all the physical DIMMs assigned to the Extended Partition is not used by other partitions.

5. Enable the socket binding function
Socket binding is the function to be assigned the CPU / DIMM resources of the Extended Partition to 2CPU of the physical partition and the DIMMs belonging to the CPU. For example, it can use it for the purpose to guarantee two or less the CPU socket number of the Extended Partition in the case that is billed software license in proportion to the number of CPU sockets.

Check the check box of [SKT Binding] field of the Extended Partition and dick the [Apply] button.
Then socket binding is enabled.

If number of CPU sockets in physical partition is 2 or less, socket binding is not required.

Remark
If socket binding function is enabled, the assigning rule of the CPU core and the DIMM is below.
- In the case that the number specified in [CORE] is smaller than the total number of core within 2CPU, cores of a specified number of [CORE] will be assigned to the Extended Partition.
- In the case that the number specified in [CORE] is greater than the total number of core within 2CPU, all cores within 2CPU will be assigned to the Extended Partition.
- In the case that the capacity specified in [GB] is smaller than the total capacity of the DIMM which belonging to 2CPU, DIMM capacity specified in [GB] will be assigned to the Extended Partition.
- In the case that the capacity specified [GB] is greater than the total capacity of the DIMM belonging to 2CPU, all DIMMs belonging to 2CPU will be assigned to the Extended Partition.

6. Assign VGA/USB/PCI Slot resources to Extended Partition.
Select [USB1], [VGA/USB2/rKVMS] and [PCI Slot] and click [Apply] button.

Remark
- Video Redirection and virtual media can be used by the Extended Partition where selected [VGA/USB2/rKVMS].
If VGA/USB2/rKVMS is assigned to other partition the following step are required.
a. Power off the Extended Partition which is assigned VGA/USB2/rKVMS.
b. Remove VGA/USB2/rKVMS of the Extended Partition and assign VGA/USB2/rKVMS to the Extended Partition which uses Video Redirection and virtual media.

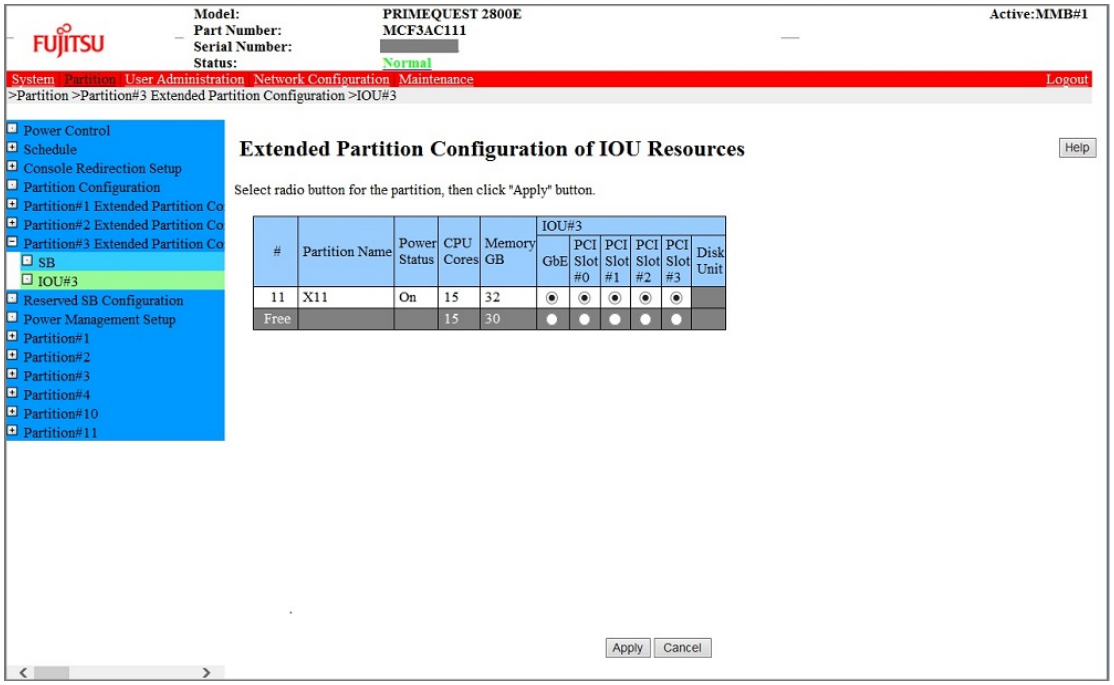
3.5.4 Assigning IOU resources to Extended Partition

Resources on the IOU assign the Extended Partition.

Operations

1. Click [Partition]-[Partition#x Extended Partition Configuration] - [IOU]
   → [Extended Partition Configuration of IOU Resources] window is displayed. For details of [Extended Partition Configuration of IOU Resources] window, see "1.3.3 Partition#x Extended Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.34 Example of [Extended Partition Configuration of IOU Resources] Window


Model: PRIMEQUEST 2800E
Part Number: MCF3AC111
Serial Number:
Status: Normal
Active:MMB#1
System Partition User Administration Network Configuration Maintenance Logout
>Partition >Partition#3 Extended Partition Configuration >IOU#3
Power Control
Schedule
Console Redirection Setup
Partition Configuration
Partition#1 Extended Partition Co
Partition#2 Extended Partition Co
Partition#3 Extended Partition Co
SB
IOU#3
Reserved SB Configuration
Power Management Setup
Partition#1
Partition#2
Partition#3
Partition#4
Partition#10
Partition#11
Extended Partition Configuration of IOU Resources
Help
Select radio button for the partition, then click "Apply" button.
| Partition Name | Power Status | CPU Cores | Memory GB | IOU#3 | GbE | PCI Slot #0 | PCI Slot #1 | PCI Slot #2 | PCI Slot #3 | Disk Unit
11 | X11 | On | 15 | 32
Free | 15 | 30
Apply
Cancel

2. Select [GbE], PCI Slot] and [DU] and click [Apply] button.

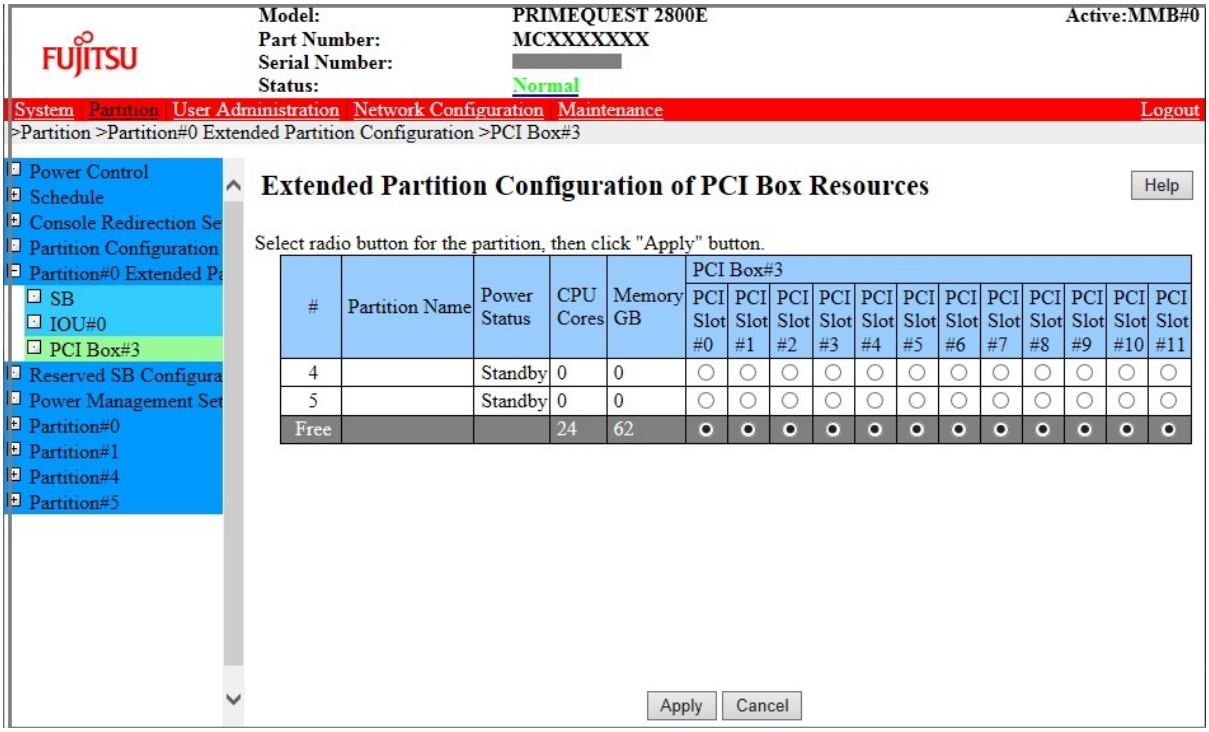
3.5.5 Assigning PCI_Box resources to Extended Partition

Resources on the PCI_Box assign the Extended Partition.

Operations

1. Click [Partition]-[Partition#x Extended Partition Configuration] - [PCI_Box]
   → [Extended Partition Configuration of PCI_Box Resources] window is displayed. For details of [Extended Partition Configuration of PCI_Box Resources] window, see "1.3.3 Partition#x Extended Partition Configuration] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.35 Example of [Extended Partition Configuration of PCI_Box Resources] Window


Model: PRIMEQUEST 2800E
Part Number: MCXXXXXXX
Serial Number:
Status: Normal
Active:MMB#0
System Partition User Administration Network Configuration Maintenance Logout
>Partition >Partition#0 Extended Partition Configuration >PCI Box#3
Power Control
Schedule
Console Redirection Se
Partition Configuration
Partition#0 Extended Pa
SB
IOU#0
PCI Box#3
Reserved SB Configura
Power Management Set
Partition#0
Partition#1
Partition#4
Partition#5
Extended Partition Configuration of PCI Box Resources
Help
Select radio button for the partition, then click "Apply" button.
| Partition Name | Power Status | CPU Cores | Memory GB | PCI Box#3 PCI Slot #0 | PCI Slot #1 | PCI Slot #2 | PCI Slot #3 | PCI Slot #4 | PCI Slot #5 | PCI Slot #6 | PCI Slot #7 | PCI Slot #8 | PCI Slot #9 | PCI Slot #10 | PCI Slot #11
4 | | Standby | 0 | 0
5 | | Standby | 0 | 0
Free | | | 24 | 62
Apply
Cancel

2. Select [PCI Slot and click [Apply] button.

3.5.6 Various mode settings

Each mode of the Extended Partition is set.
Setting items of based on physical partition are shown below.

Although mode settings are shown in table below, some of the items cannot be done for each Extended Partition and they are taken over by settings of relevant Physical Partitions. While items in this table can be set per Extended Partition, some items have limitations for their setting. For details, please refer to remarks in this table.
Item unremarked in "Setting item" column is configurable item for Extended Partition.

For details on the respective settings, see PRIMEQUEST 2000 series Tool Reference (CA92344-0539)

TABLE 3.8 Setting of Various modes

Setting item	Screen transition	Refer to[PRIMEQUEST 2000 series Tool Reference] (CA92344-0539)
Memory Operation Mode (*1)	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
Memory Mirror RAS Mode (*1)	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
PCI Address Mode (*1)	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
Dynamic Reconfiguration (*1)	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
On board LAN Mode (*2)	MMB Web-UI-[Partition]-[Partition#x]-[Mode]	1.3.8[Partition #x] Menu ■ [Mode] Window
Assignment of I/O space	UEFI-[Device Manager]-[I/O Space Assignment Configuration]	3.4.4.2[I/O Space Assignment Configuration] Menu
Hyper-threading (*1	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
CPU Active Cores (*2)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Hardware Prefetcher	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Adjacent Cache Line Prefetch	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
DCU Steamer Prefetcher	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
DCU Ip Prefetcher	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Execute Disable Bit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Intel Virtualization Technology (*3)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Intel (R) VT-d (*3)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Power Technology	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Enhanced SpeedStep (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Turbo Mode (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Energy Performance (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
P-State Coordination (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
CPU C3 Report	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
CPU C6 report	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu

Setting item	Screen transition	Refer to[PRIMEQUEST 2000 series Tool Reference] (CA92344-0539)
CPU C7report	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Package C State limit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
QPI Link Frequency Select (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Frequency Floor Override (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Perfmon and DFX devices (*1)	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Commit Changes and Exit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu
Discard Changes and Exit	UEFI-[Device Manager]-[CPU Configuration]	3.4.4 [CPU Configuration] Menu

*1: Their item can't be changed. Their setting is same as physical partition.
*2: Their item can't be changed. Their item is not shown.
*3: Their item can't be changed. Their setting is remained in initial default.

Note

- Confirm the I/O space is allocated in the SAS device (SAS card, RAID card, RAID card in DU or RAID card in SB) of a relevant partition.
  Further, also confirm the allocation of the I/O space to the FC card, onboard LAN and LAN Card (Only the card for the boot passing), while installing on the SAN storage device.
  SAS device is displayed as "Device: SAS", and the FC device is displayed as "Device: Fibre". When I/O space is not allocated, operate [I/O Space Assignment Configuration] menu and remove the allocation of LAN and fibre channel.
  However, do not remove the allocation of I/O space for the FC card onboard LAN and LAN Card used for installation, when the operating system is installed for the storage in SAN environment.

For details on [Mode] window, see "■ [Mode] window" of "1.3.8 [Partition#x] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

3.5.7 Settings of Console Redirection

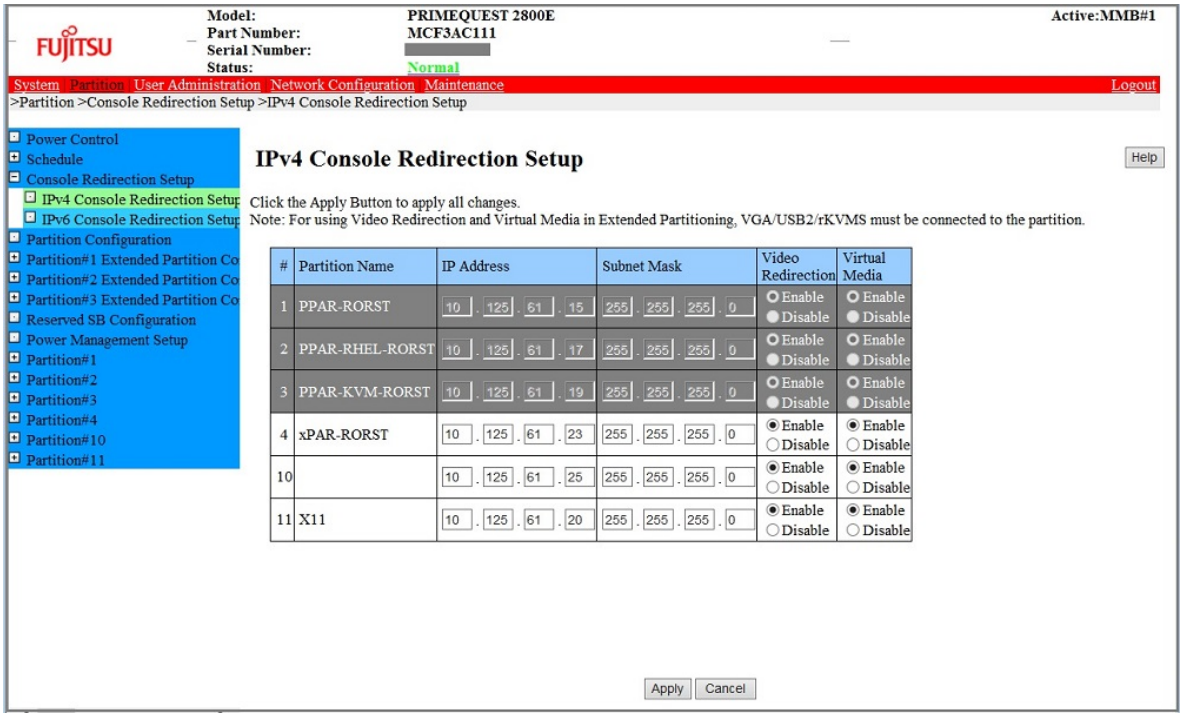
When operating system is installed to Extended Partition, it is necessary to assign VGA/USB2/rKVMS of SB resource and set Console Redirection.
Set the Console Redirection to the subnet same as management LAN.

Remark
If VGA/USB2/rKVMS of SB resource is not assigned Console Redirection cannot be set.

[IPv4 Console Redirection Setup] window

1. Click [Partition] - [Console Redirection Setup] - [IPv4 Console Redirection Setup] window.
   → [IPv4 Console Redirection Setup] window is displayed. For details on window, see "1.3.3 [Console Redirection Setup] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.36 Example of [IPv4 Console Redirection Setup] Window


Model: PRIMEQUEST 2800E
Part Number: MCF3AC111
Serial Number:
Status: Normal
Active:MMB#1
System Partition User Administration Network Configuration Maintenance Logout
>Partition >Console Redirection Setup >IPv4 Console Redirection Setup
Power Control
Schedule
Console Redirection Setup
IPv4 Console Redirection Setup
IPv6 Console Redirection Setup
Partition Configuration
Partition#1 Extended Partition Co
Partition#2 Extended Partition Co
Partition#3 Extended Partition Co
Reserved SB Configuration
Power Management Setup
Partition#1
Partition#2
Partition#3
Partition#4
Partition#10
Partition#11
IPv4 Console Redirection Setup
Help
Click the Apply Button to apply all changes.
Note: For using Video Redirection and Virtual Media in Extended Partitioning, VGA/USB2/rKVMS must be connected to the partition.
Partition Name IP Address Subnet Mask Video Redirection Virtual Media
1 PPAR-RORST 10.125.61.15 255.255.255.0 Enable Disable Enable Disable
2 PPAR-RHEL-RORST 10.125.61.17 255.255.255.0 Enable Disable Enable Disable
3 PPAR-KVM-RORST 10.125.61.19 255.255.255.0 Enable Disable Enable Disable
4 xPAR-RORST 10.125.61.23 255.255.255.0 Enable Disable Enable Disable
10 10.125.61.25 255.255.255.0 Enable Disable Enable Disable
11 X11 10.125.61.20 255.255.255.0 Enable Disable Enable Disable
Apply
Cancel

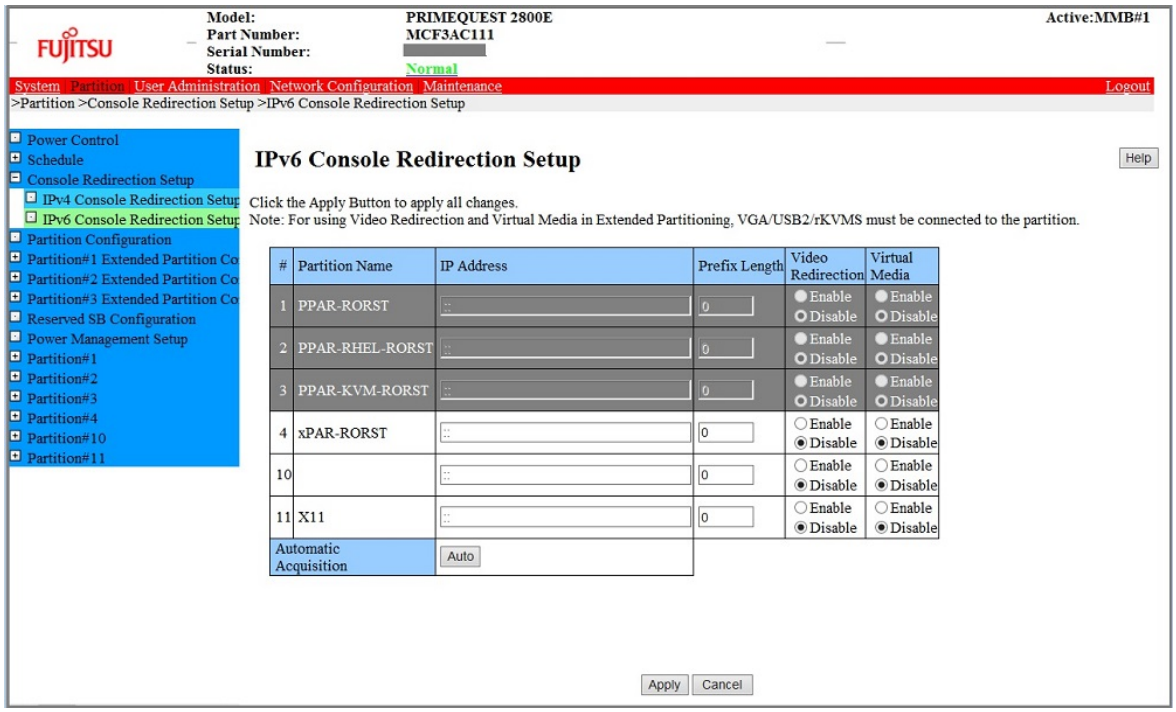
2. Set IP address and subnet mask to access Console Redirection LAN for IPv4
3. Enable video redirection and virtual media respectively.
4. Click [Apply] button.

Note
After installation, disable the functions not used.

[IPv6 Console Redirection Setup] window

1. Click [Partition] - [Console Redirection Setup] - [IPv6 Console Redirection Setup] window.
   → [IPv6 Console Redirection Setup] window is displayed. For details on window, see "1.3.3 [Console Redirection Setup] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.37 Example of [IPv6 Console Redirection Setup] Window


Model: PRIMEQUEST 2800E
Part Number: MCF3AC111
Serial Number:
Status: Normal
Active:MMB#1
System Partition User Administration Network Configuration Maintenance Logout
>Partition >Console Redirection Setup >IPv6 Console Redirection Setup
Power Control
Schedule
Console Redirection Setup
IPv4 Console Redirection Setup
IPv6 Console Redirection Setup
Partition Configuration
Partition#1 Extended Partition Co
Partition#2 Extended Partition Co
Partition#3 Extended Partition Co
Reserved SB Configuration
Power Management Setup
Partition#1
Partition#2
Partition#3
Partition#4
Partition#10
Partition#11
IPv6 Console Redirection Setup
Help
Click the Apply Button to apply all changes.
Note: For using Video Redirection and Virtual Media in Extended Partitioning, VGA/USB2/rKVMS must be connected to the partition.
Partition Name IP Address Prefix Length Video Redirection Virtual Media
1 PPAR-RORST :: 0 Enable Disable Enable Disable
2 PPAR-RHEL-RORST :: 0 Enable Disable Enable Disable
3 PPAR-KVM-RORST :: 0 Enable Disable Enable Disable
4 xPAR-RORST :: 0 Enable Disable Enable Disable
10 :: 0 Enable Disable Enable Disable
11 X11 :: 0 Enable Disable Enable Disable
Automatic Acquisition Auto
Apply Cancel

2. Set IP address and the prefix length to access Console Redirection LAN for IPv6. When it is set automatically, IP address and the prefix length is acquired by clicking on [Auto] button.
3. Enable video redirection and virtual media respectively.
4. Click [Apply] button.

3.5.8 Power OFF and ON of the Extended Partition

Power OFF and power ON are required for each Extended Partition to reflect the configuration change in the Extended Partition. For the details of Power OFF and power ON, see "CHAPTER 7Power ON and OFF of the partition".

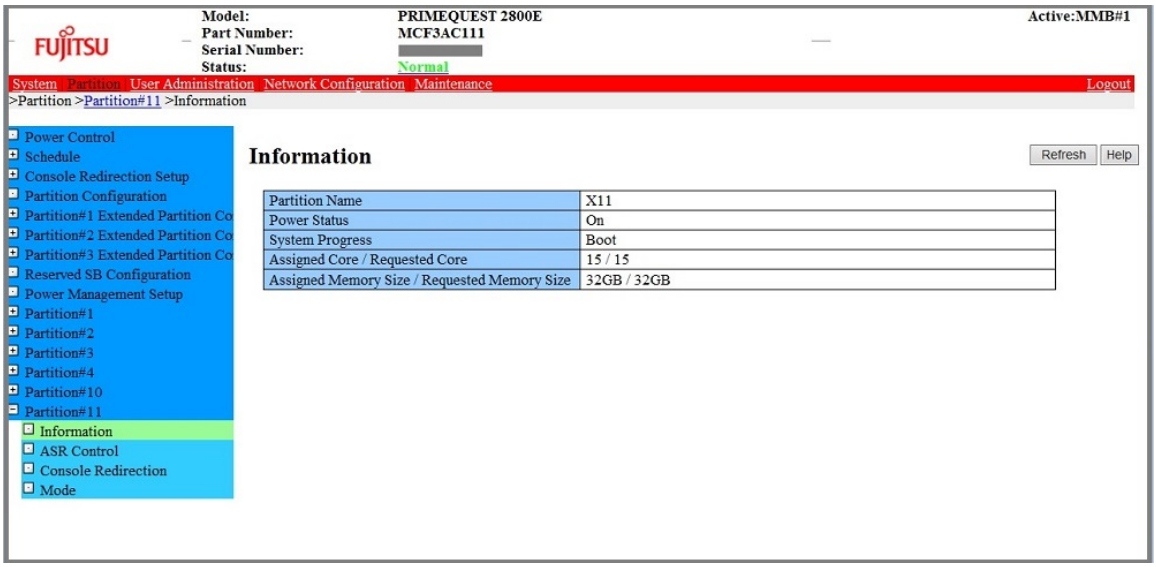
3.5.9 Confirmation of Extended Partition information

The status of the partition and the partition related information is displayed.
The partition configuration of the entire system of PRIMEQUEST 2000 series can be confirmed even by the [Partition Configuration] window.

Operations

1. Click [Partition]-[Partition#x]-[Information].
   →[Information] window is displayed. For details on [Information] window, see "■ [Information] window" of "1.3.8 [Partition#x] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 3.38 Example of [Information] Window



3.6 Storage of the configuration information

Here, the storage of the information configured at the time of installation is explained. Take the backup of the MMB configuration information.

Remark
Regularly take the backup of the MMB configuration information after the operation begins.
All the printed windows are examples of the display. The contents that are displayed by the system configuration are different.

3.6.1 Backup of the MMB configuration information

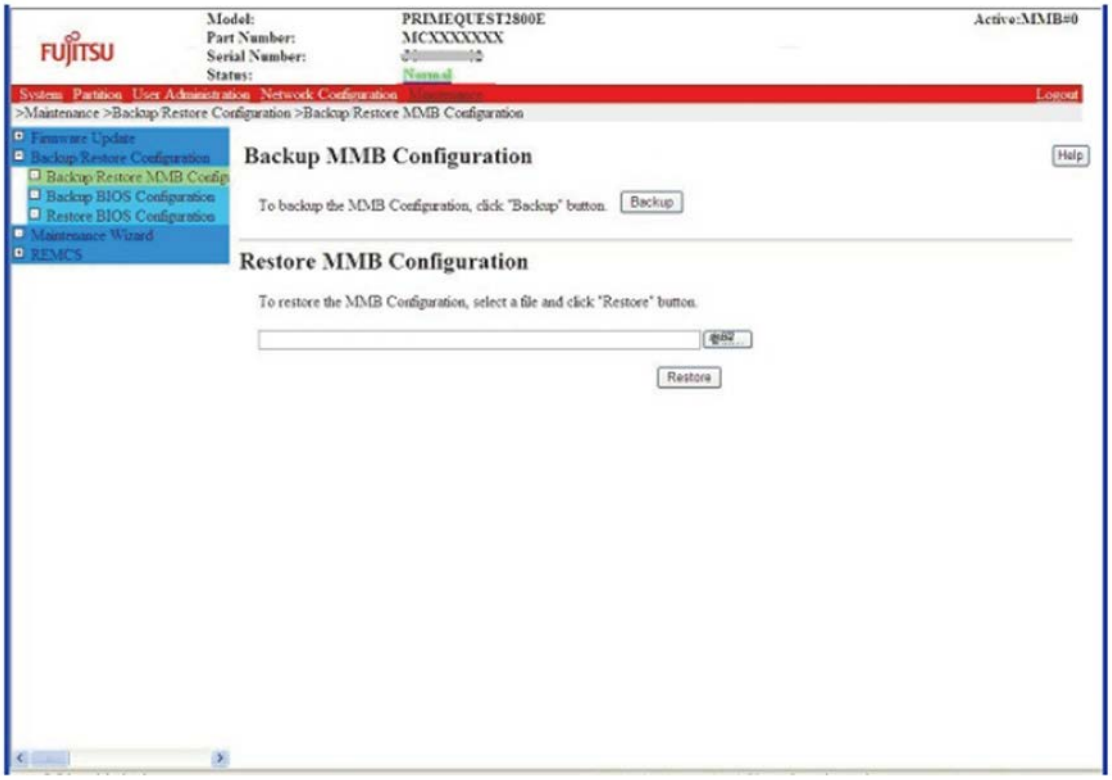
Here, the Backup of the MMB configuration information is explained.

Remark
The configuration information is restorable only with the PRIMEQUEST chassis which backed it up. For the details of MMB configuration information restore see "8.12 Backup/Restore of MMB configuration n information" of PRIMEQUEST 2000 Series Administration Manual (CA92344-0537).

Operating principle

1. Click [Maintenance] - [Backup/Restore Configuration] - [Backup/Restore MMB Configuration]
   → The Backup/Restore MMB Configuration window is displayed. For [Backup/Restore MMB Configuration] window see "[■ Backup/Restore MMB Configuration] window" of "1.6.2 [Backup/Restore Configuration] menu" of PRIMEQUEST 2000 series Administration Tool Reference (CA92344-0539).

FIGURE 3.39 Example of [Backup/Restore MMB Configuration] Window



2. Click the [Backup] button.
   →The storage location dialog box of the browser is displayed.
3. Select the storage path and click the [OK] button.

→The download of configuration information file begins.
The initial value name of the MMB configuration information file to be backed up is as follows.

MMB_(Backup date)_(MMB version).dat

CHAPTER 4 Installation of Operating System and bundled software

The installation method of operating system and the bundled software is explained here.
All the inserted windows are examples of display and the contents displayed by the system configuration, etc. are different.

4.1 Installation procedure of Operating System and bundled software

When Boot Watchdog is enabled, during installation operation, partition reset may occur unpredictably by Boot Watchdog function. Therefore, Boot Watchdog is cancelled before operating system is installed. For the cancellation method see "9.4.1 Automatic reboot condition setting of partition" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
SVIM(ServerView Installation Manager) is used to install operating system in the partition of PRIMEQUEST 2000 series. SVIM is a setup support tool to execute the below mentioned operations.

- Installation of operating system
- Installation of driver necessary for the operating system
- Installation of the bundled software

For the software which is automatically installed by using SVIM see "3.3 Bundled software" of PRIMEQUEST 2000 series General Description (CA92344-0534).
For SVIM outline see ServerView Suite ServerView Installation Manager.
Moreover, there are points to be noted for SVIM. See the list of points to be noted for the PRIMEQUEST 2000 series ServerViewSuite .

Notes
Confirm the installation of SAN boot environment, installation of VMware as follows.

- Configuration of SAN boot environment
  When SAN boot environment is to be installed, the SAN boot environment is configured before the operating system is installed.
  For the construction of SAN boot environment, see PRIMEQUEST 2000sSeries SAN Boot Environment Configuration Manual (C122-E206EN) .
- When the installation VMware of operating system and the bundled software is to be installed then the procedure is different. For Notes on VMware installation, see “Appendix D Notes on VMware installation”.

4.2 Install procedure of Operating System to Extended Partition

Here, points to be noted for the procedure to install Operating System to Extended Partition.

- Virtual Media is available to only one Extended Partition which is assigned VGA/USB2 of PPAR Partition. Therefore, when OS is installed with another Extended Partition on the same PPAR partition after carrying out OS installation with a certain PAR partition, it is necessary to power OFF the PPAR partition and reassignment of VGA/USB2 to the Extended Partition which carries out OS installation.

- Before installing the OS, assign a VGA/USB2 temporarily to the relevant extended partition.
  In the case of the extended partition which is not assigned a VGA, the serial interface is required.
  Fixed as follows:
  Example)
  /etc/grub.conf of RHEL6
  - And comment out the line of splashimage = (hd0, 1) / grub / splash.xpm.gz
  - Added console = ttyS0, 19200n8 the kernel line

- When the OS starts "Fast TSC calibration failed" appears in RHEL message.
  This message is output when access performance to the PIT (Programmable Interval Timer) is less than the expected value in TSC (Time Stamp Counter) adjustment process of OS boot.
  This cause is virtualization overhead of PIT, which is performed by the Extended Partitioning Firmware.
  But in this case, the system does not be affected because the OS switches automatically to the HPET (High Precision Event Timer).

4.3 Procedure to install Windows in SAN/iSCSI storage device

Here, the procedure to install Windows in SAN storage device is explained. Start the installation after confirming the MMB configuration setting and successful login to the MMB. For the settings of SAN storage device, FC-card, Converged Network Adapter and NIC for iSCSI Boot, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN) .

4.3.1 Presetting

The following settings are done if necessary.

1. LUN of SAN storage device is set.

2. [PCI ROM Priority] of BIOS is set.
   - For the UEFI Install
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to ”EFI Compatible ROM”.
   - For the UEFI Install:
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to ”Legacy ROM”.
     - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to “Enable” only for booting Device.

3. BIOS is set to recognize LUN of FC card.
   For the settings of FC card, Converged Network Adapter and NIC for iSCSI Boot, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN) .

4. The partition settings in MMB are confirmed after the internal HDD/SDD of PRIMEQUEST is removed.
   - SB/IOU configuration is set
   See “3.4.1 Setting the partition configuration”
   - Console redirection is set
   See “3.4.6 Settings of Console Redirection”
   - Video redirection: Enable
   - Virtual media: Enable
   - Various modes are set
   See “3.4.5 Various mode settings”

5. Only LUN which becomes the installation target of SAN storage device is connected to the partition of PRIMEQUEST.
   For the settings of SAN storage device, see “Attached manual in the SAN storage device”.

6. I/O space is allocated in FC card of the boot path target and SAS RAID controller, RAID card. For the allocation of I/O space, see “5.5.1 How to use sadump (Linux)” and “3.4.5 Various mode settings” of PRIMEQUEST 2000 series Administration Tool Reference (CA92344-0539).

4.3.2 Preparation for installation

The following preparations are done.

1. The following disk images should be prepared.
   Media of Windows operating system
2. FC cable is made a single path (Connection of only 1 FC cable).

4.3.3 Installation of operating system

Operating system installation by SVIM is explained.
There are the following types in the operating system installation by SVIM. For the detailed procedure of the respective modes, see ServerView Suite ServerView Installation Manager.

TABLE 4.1 Operating system installation by SVIM

Mode	Function Overview	Objective
Quick Mode	The operating system can be installed in the state recommended by Fujitsu by only executing the required minimum settings.	This mode is used when operating system is easily installed.
Guide Mode	It is set according to wizard set up information. The information that was set, is saved in a configuration file and can be used at the time of re-install	This mode is used for advanced setting of RAID and operating system.

All the inserted windows are examples of display and the contents displayed by the system configuration, etc. are different.

Operations

1. Make the settings by which the ServerView Suite DVD is booted from the virtual media for the partition.
   For settings, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned on.

   Notes
   It can be started by selecting "Force boot from DVD" by Boot Selector or it can be started from the virtual media by changing the boot order to DVD by UEFI.
   When the operating system corresponds to UEFI mode then the installation can be done in the UEFI mode by changing the boot order by the following procedure.
   a. After the power supply of partition is turned on, press any key (such as the [Space] key except the [Enter] key until the Fujitsu logo is displayed and the Boot Manager front page is displayed when any key (such as the [Space] key) is pressed.
   b. The menu is selected in the following order by the Boot Manger front page. [Boot Maintenance Manager]- [Boot Options]- [Change Boot Order]- [Change the order]
   c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For the Boot order setting method, see "■ Change of priority level (Change Boot Order)" of "3.5.2 [Boot Options] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).
   d. [Commit Changes and Exit] – [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed. In case of English, select "English".
4. Click the "Next" button without setting anything on the initial display window.
5. [Deployment] is selected by the [To Welcome ServerView Installation Manager].
6. Installation mode is selected, operating system to be installed is selected and the operating system is set.

   Remark
   IP address of LAN cannot be set by the setting of operating system. Set the IP address after operating system installation.

7. Click "Installation start-up".
   The installation starts.
8. It is replaced to the installation medium of operating system according to the SVIM instruction.

4.3.4 Bundled software setting after installation is completed

Bundled software is set after the completion of operating system installation.

1. OneCommand Manager is installed in the following cases.
   - When the Emulex FC card or Converged Network Adapter Card is mounted.
   And
   - When OneCommandManager is not installed
   The installation condition of OneCommandManager is determined by the presence of [Emulex] – [OneCommand Manager] under the [start] menu – [all programs].
   Note
   In Windows Server 2012 or Windows Server 2012 R2, “the [start] menu – [all programs]“ should read “the [start] menu – [all apps]“.
   a. Driver/Utility of FC Card is downloaded from the following URL.
      http://support.ts.fujitsu.com/
      Note
      Driver/ Utility can be used by the PRIMEQUEST 2000 series though PRIMERGY is described in the downloaded binary.
   b. The downloaded file is executed by a double click.
      The prompt window of cmd.exe (black window) is displayed for a while and the file is extracted.
   c. The window closes automatically after the extraction is completed.
      The download file is extracted and folder or file is newly created.
      Remark
      If the window does not close even if "Complete" is displayed on the title bar of the window then click the "Close" button and close the window.
   d. Double click and execute "elxocm-windows-x86-XXXXX.exe"(in case of x86, 32-bit OS) or "elxocm-windows-x64-XXXXX.exe"(in case of x64, 64-bit OS) in "FC_vXXXXXX" directory created by extraction.
      Remark
      "XXXX" shows the version number. Read properly.
2. Qlogic Converge Console (GUI/CLI) is installed in the following cases.
   - When the Qlogic FC card is mounted.
   And
   - When Qlogic Converge Console (GUI/CLI) is not installed
   The installation condition of Qlogic Converge Console (GUI) is determined by the presence of [Qlogic Corporation] – [QCC GUI (localhost)] under the [start] menu – [all programs]
   The installation condition of Qlogic Converge Console (CLI) is determined by the presence of [Qlogic Management Suite] -[QConvergeConsole CLI] under the [start] menu – [all programs]
   Note
   In Windows Server 2012 or Windows Server 2012 R2, “the [start] menu – [all programs]“ should read “the [start] menu – [all apps]“.
   a. Driver/ Utility of FC Card is downloaded from the following URL.
      http://support.ts.fujitsu.com/
      Note
      Driver/Utility can be used by the PRIMEQUEST 2000 series though PRIMERGY is described in the downloaded binary.
   b. The downloaded file is executed by a double click.
      The prompt window of cmd.exe (black window) is displayed for a while and the file is extracted.
   c. The window closes automatically after the extraction is completed.
      The download file is extracted and folder or file is newly created.
      Remark
      If the window does not close even if "Complete" is displayed on the title bar of the window then click the "Close" button and close the window.
   d. Double click and execute "QConvergeConsole_Installer_Windows_XXXXX.exe" in "QCC_vXXXXXX" directory created by extraction.
      Remark
      "XXXX" shows the version number. Read properly.
3. When the installation is completed, the partition is rebooted.
4. The setting of management LAN is confirmed.
   Confirm STP function for switch is turned off if the switch is connected to management LAN for MMB.
5. The trap destination and mail destination are set through MMB.
   Execute the coordination with the management software, etc. only if necessary.
   a. [SNMP settings] is displayed on the MMB window and enable [SNMP] .
   b. The trap destination of SNMP through MMB is set.
      “6.5.2 Set up of SNMP”

6. Dump area is set.
   Confirm that there is sufficient free space on the hard disk before acquiring the memory damp.
   For details, see "11.4.3 Settings of dump environment (Windows)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
7. The management information and configuration information are stored.
   For details, see "5.7 Saving management and configuration information".
8. UPS battery monitor is set.
   When the duration of life of the UPS battery is monitored: see "Setting for component replacement alert for PRIMEQUEST ". This document is downloaded from the following URL.
   http://www.fujitsu.com/global/products/computing/servers/mission-critical/primequest/documents/manuals/
9. Watchdog Timer allows reboot OS in case that OS freezes. Rebooting OS is executed when the set time passes, For details, see "8.4 Automatic Partition Restart Conditions" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

4.3.5 Connection of SAN and the internal HDD/SDD after installation

For SAN and the internal HDD/SDD connection after the completion of installation, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN) .

1. Change and confirm the settings of the detailed information of the FC card.
   For details, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).
2. OneCommand Manager is started. The following driver parameters are set.
   For the details of the set value, see San storage device manual.
   - Topology
   - Queue Depth
   - Queue Target
   - Link Speed
3. Check the registry information.
   For details on the checking method, see PRIMEQUEST 2000 Series SAN Boot Environment Creation Manual (C122-E206EN).
   For details on setting value, see Manual of SAN storage device.
   -TimeOutValue

4.4 Procedures to install Windows into internal HDD/SSD

This section briefly describes the procedures by which Windows is installed in the internal HDD/SSD. Start the installation after checking the MMB configuration and successful to log in to the MMB.

4.4.1 Presetting

If necessary, the following settings are done.

1. Remove each built-in HDD that is not the installation destination.

2. The setting of partition is checked by MMB.
   - Setting of configuration of SB/IOU
     See "3.4.1 Setting the partition configuration"
   - Setting of Console Redirection
     See "3.4.6 Settings of Console Redirection"
   - Video redirection: Enable
   - Virtual media: Enable
   - Setting of various modes
     See "3.4.5 Various mode settings"

3. [PCI ROM Priority] of BIOS is set.

- For the UEFI Install
  - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "EFI Compatible ROM".
- For the UEFI Install:
  - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "Legacy ROM".
  - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to "Enable" only for booting Device.

4. The I/O space is allocated in the SAS card and in the SAS RAID controllerRAID card.
   For details on allocation of I/O space, see "3.4.5 Various mode settings" and [Configure I/O Space Assignment] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

4.4.2 Preparations for installation

The following preparations are done.

1. The following disk images are prepared.
   Media of Windows operating system
2. Remove all FC cables.
3. Mount the following disk image by connecting the video redirection.
4. Change the boot order, and set DVD Boot to the top priority of the starting order.
   For details, see "1.3.1 [Power Control] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

4.4.3 Installation of operating system

This section explains the installation of operating system using SVIM.
There are the following types of operating system installations using SVIM.
For the detailed procedures of each mode, see ServerView Suite ServerView Installation Manager.

TABLE 4.2 Operating System Installation using SVIM

Mode	Functional Overview	Purpose
Quick mode	You can simply use the minimum settings necessary for operating system installation. This mode uses Fujitsu's recommended settings.	For easy installation.
Guide mode	You can specify setup information by following the instructions of the wizard. You can save the specified information in a configuration file for use during reinstallation.	For detailed setting of RAID or OS.

All the screenshots are the display examples. Contents displayed may differ depending on system configuration.

Operations

1. If setting is done, you can boot the ServerView Suite DVD from virtual media for the partition.
   For details on configuration, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned ON.

Note

It can be started by selecting "Force boot from DVD" by Boot Selector or it can be started from the virtual media by changing the boot order to DVD by UEFI.
When operating system corresponds to the UEFI mode, the installation can be done in UEFI mode by changing the boot order according to the following procedure.

a. After turning on the power supply of the partition, while the FUJITSU logo is displayed, press any key (such as [Space] key) except [Enter] key and the Boot Manager front page is displayed.

b. The menu is selected on the Boot Manager front page in the following order. [Boot Maintenance Manager]-[Boot Options]-[Change Boot Order]-[Change the order]

c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
   For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.

For details on the setting method of boot order, see "■ Change Boot Order of "3.5.2 [Boot Options] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

d. [Commit Changes and Exit] - [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed. In case of English, select "English".
4. In initial display window, click the [Next] button as follows without setting anything.
5. Select [Deployment] on the [To Welcome ServerView Installation Manager] window.
6. Select the installation mode and the operating system to be installed and set the operating system.

Remark
The IP address of LAN cannot be set in the setting of operating system. Set the IP address after installing the operating system.

7. Click [Installation Start].
   The installation is started.
8. Replace with the installation medium of the operating system according to the instructions of SVIM.

4.4.4 Setting the bundled software after completion of installation

After completion of operating system installation, set the bundled software.

1. Install OneCommand Manager in the following cases.
   - When the Emulex FC card or Converged Network Adapter Card is mounted
     and
   - When the OneCommand Manager is not installed.
     It can be judged whether [Emulex] -[OneCommand Manager] exist under [Start] menu-[All programs] in the installation status of OneCommand Manager.
     Note
     In Windows Server 2012 or Windows Server 2012 R2, "the [start] menu – [all programs]" should read "the [start] menu – [all apps]".

   a. Download the driver/utility of FC card or Converged Network Adapter Card from the following URL.
      http://support.ts.fujitsu.com/
      Note:
      The driver/utility can be used in the PRIMEQUEST 2000 series though PRIMERGY is described in the downloaded binary.
   b. Double click the downloaded file and execute it.
      The prompt screen of cmd.exe (black window) is displayed for a while and the file is extracted.
   c. The window is closed automatically when the extraction is completed.
      The downloaded file is uncompressed, and the folder or the file is created newly.
      Remark
      When the window is not closed even if displayed as [Complete] in the title bar of the window, click the [Close] button and close the window.
   d. Double-click the " elxocm-windows-x86-XXXXX.exe"(in case of x86, 32-bit OS) or "elxocm-windows-x64-XXXXX.exe"(in case of x64, 64-bit OS) in the "FC_vXXXXXX" directory created in the decompression, and execute it.
      Remark
      "XXXXX" shows the version number. Read it in different way properly.

2. Qlogic Converge Console (GUI/CLI) is installed in the following cases.
   - When the Qlogic FC card is mounted.
   And
   - When Qlogic Converge Console (GUI/CLI) is not installed
   The installation condition of Qlogic Converge Console (GUI) is determined by the presence of [Qlogic Corporation] – [QCC GUI(localhost)] under the [start] menu – [all programs]
   The installation condition of Qlogic Converge Console (CLI) is determined by the presence of [Qlogic Management Suite] -[QConvergeConsole CLI] under the [start] menu – [all programs]
   Note
   In Windows Server 2012 or Windows Server 2012 R2, "the [start] menu – [all programs]" should read "the [start] menu – [all apps]".
   a. Driver/ Utility of FC Card is downloaded from the following URL.

http://support.ts.fujitsu.com/

Note

Driver/Utility can be used by the PRIMEQUEST 2000 series though PRIMERGY is described in the downloaded binary.

b. The downloaded file is executed by a double click.
The prompt window of cmd.exe (black window) is displayed for a while and the file is extracted.

c. The window closes automatically after the extraction is completed.
The download file is extracted and folder or file is newly created.

Remark

If the window does not close even if "Complete" is displayed on the title bar of the window then click the "Close" button and close the window.

d. Double click and execute "QConvergeConsole_Installer_Windows_XXXXX.exe" in "QCC_vXXXXXX" directory created by extraction.

Remark

"XXXX" shows the version number. Read properly.

3. When the installation is completed, reboot the partition.
4. Check the setting of management LAN.
The STP function of the port to be connected is turned OFF when the management LAN is used for communication with MMB in the switching hub which supports the STP function.
5. Set the trap destination and Mail Sending destination through MMB.
Execute linkage with the operation management software only if necessary.
   a. The [SNMP setting] is displayed on the MMB screen, and enable the SNMP.
   b. The trap destination of SNMP is set through MMB.
   See "6.5.2 Set up of SNMP"
6. Set the dump area.
Check whether there is sufficient free space in the hard disk before acquiring the memory dump. For details, see ("11.4.4 Setting (Windows) of dump environment" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
7. Save the management information and configuration information.
For details, see "5.7 Saving management and configuration information".
8. UPS battery monitor is set.
When the duration of life of the UPS battery is monitored: see "Setting for component replacement alert for PRIMEQUEST ". This document is downloaded from the following URL.
http://www.fujitsu.com/global/products/computing/servers/mission-critical/primequest/documents/manuals/
9. Watchdog Timer allows reboot OS in case that OS freezes. Rebooting OS is executed when the set time passes, For details, see "8.4 Automatic Partition Restart Conditions" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

4.4.5 After Installation, Connection between SAN and internal HDD/SSD

For SAN and the internal HDD/SDD connection after the completion of installation, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN) .

1. Change and confirm the settings of the detailed information of the FC card.
For details, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).
2. OneCommand Manager is started. The following driver parameters are set.
For the details of the set value, see San storage device manual.
- Topology
- Queue Depth
- Queue Target
- Link Speed
3. Check the registry information.
For details on the checking method, see PRIMEQUEST 2000 Series SAN Boot Environment Creation Manual (C122-E206EN).
For details on setting value, see Manual of SAN storage device.
-TimeOutValue

4.5 Procedures to install RHEL in SAN storage device

This section describes the procedure to install RHEL in SAN storage device.
Start the installation after confirming the MMB configuration and successful to log in to the MMB. . For details on SAN storage, FC card, Converged Network Adapter and NIC for iSCSI Boot setting, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).

4.5.1 Presetting

Set the following if necessary.

1. Set the LUN of the SAN storage device.
2. [PCI ROM Priority] of BIOS is set.
   - For the UEFI Install
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to ”EFI Compatible ROM”.
   - For the UEFI Install:
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to ”Legacy ROM”.
     - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to “Enable” only for booting Device.
3. Set the BIOS to recognize LUN of the FC card, Converged Network Adapter and NIC for iSCSI Boot.
   For setting the FC card, Converged Network Adapter and NIC for iSCSI Boot, see “Chapter 2 Setting of fiber channel card (FC card)” of PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).
4. Check the setting of the partition by MMB after removing the internal HDD/SSD of PRIMEQUEST.
   - SB/IOU configuration is set
     See “3.4.1 Setting the partition configuration”
   - Console redirection is set
     See “3.4.6 Settings of Console Redirection”
   - Video redirection: Enable
   - Virtual media: Enable
   - Various modes are set
     See “3.4.5 Various mode settings”
5. Connect only the LUN which installs the SAN storage device to the partition of PRIMEQUEST.
   For the setting of SAN storage device, see the manual attached with the SAN storage device.
6. Allocate the I/O space in the FC card for boot path and in the SAS RAID controllerRAID card.
   For details on allocation of the I/O space, see “5.5.1 [Configure I/O Space Assignment] menu” and “3.4.5 Various mode settings” of PRIMEQUEST 2000 Series Tool Reference (CA92344-0539).

4.5.2 Preparation for installation

No RHEL distribution DVD is available for RHEL installation. Users who have purchased a RHEL subscription will need to create a RHEL distribution DVD.
Customer Portal :
https://access.redhat.com/home
Create an image of the RHEL distribution DVD.

Creation of RHEL installation DVD image

The image file of distribution DVD is downloaded by log in to the customer portal (https://access.redhat.com/) of Red Hat Company in other systems.

Note
The image file of distribution DVD is different for the minor release and each architecture (for Intel64). Download the targeted DVD image file.

Remark
The subscription registration to the customer portal of the Red Hat Company is required to download the file.

Preparation for boot

The FC cable is made single path (connect only one FC cable).

4.5.3 Execution of installation

The operating system installation with SVIM is explained.

There are the following types for operating system installation with SVIM. For the detailed procedure of each mode, see ServerView Suite ServerView Installation Manager.

TABLE 4.3 Operating system installation with SVIM

Mode	Functional Overview	Purpose
Quick mode	The operating system can be installed with the recommendation of Fujitsu only by setting minimum required limits.	It is used when the operating system is to be readily installed.
Guide mode	The setup information is set following the wizard. The information which is set is saved in the configuration file, and it can be used during reinstallation.	It is used when the details of RAID and the operating system are set.

All the screenshots are display examples. The contents displayed may differ depending on system configuration.

Operations

1. The settings are done to boot the ServerView Suite DVD from virtual media for the partition.
   For details on configuration, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned ON.

   Note:
   It can be started by selecting "Force boot from DVD" by Boot Selector or it can be started from the virtual media by changing the boot order to DVD by UEFI.
   When operating system corresponds to the UEFI mode, the installation can be done in UEFI mode by changing the boot order according to the following procedure.
   a. After turning on the power supply of the partition, while the FUJITSU logo is displayed, press any key (such as [Space] key) except [Enter] key and the Boot Manager front page is displayed.

   b. The menu is selected on the Boot Manager front page in the following order. [Boot Maintenance Manager]-[Boot Options]-[Change Boot Order]-[Change the order]

   c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For details on the setting method of boot order, see "■ Change Boot Order of "3.5.2 [Boot Options] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

   d. [Commit Changes and Exit] - [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed.
   In case of English, select "English".
4. In initial display window, click [Next] button without setting anything.
5. Select [Deployment] in [Welcome ServerView Installation Manager] window.
6. Select installation mode, select operating system to be installed and set the operating system.

   Remark
   The IP address of LAN cannot be set in setting operating system. Set IP address after installing the operation system.
7. Click [Start installation].
   The installation is started.
8. Replace with the installation medium of operating system according to the instructions of SVIM.

4.5.4 Configuring Bundled Software after Installation

Bundled software is configured after installing the operating system.

1. The trap destination from the partition is configured.

   Remark
   Configuring of the trap destination can be checked by using standard trap for SNMP service. For details, see "6.5.2 Set up of SNMP".

2. The trap destination and Mail destination through MMB are configured.
   In linkage with operations management software, it is configured only if necessary.
   - Configuring SNMP trap destination through MMB
     See "6.5.2 Set up of SNMP"
   - The report destination and the filter are set when Alarm E-Mail is configured.
     See "3.3.9 Set up of Alarm E-Mail"
3. OneCommand Manager is installed while installing FC card.

   a. By executing the following command, the libnl package information is displayed. Confirm that libnl is installed.

   ```
   #       rpm -qi libnl
   ```

   If libnl is not installed, search libnl package in installation media of distribution, and install libnl package by executing the following command.

   ```
   #       rpm -ivh libnl-<version>-<release>.<arch>.rpm
   ```

   Remark
   Read the part of <version>, <release>, <arch> properly.

   b. Download the driver/utility of FC Card from the following URL.
   http://support.ts.com/

   Note
   Though PRIMERGY is described in the downloaded binary, driver/utility can be used by the PRIMEQUEST 2000 series.

   c. The file to be downloaded is copied in an arbitrary directory of the PRIMEQUEST 2000 series and then extracted.

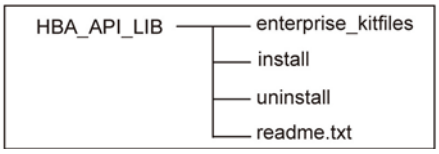
   ```
   #       tar xvzf F1010350.tar.gz
   ```

   d. The file given below is extracted.

   Remark
   For the method of installing "SNIA HBA API library", see readme.txt extracted under HBA_API_LIB.

   e. Reboot the partition after installation.

FIGURE 4.1 File Structure



4. The dump area is configured.
   Confirm that hard disk has enough free space before collecting the memory dump.
   After OS installation, do a setting of kdump as following:
   a. Change the setting of Grub's parameter "crashkernel" to "256MB".

(example)
Edit the file "/etc/grub.conf" as following:

```
default=0
timeout=5
splashimage=(hd0,0)/grub/splash.xpm.gz
hiddenmenu
title Red Hat Enterprise Linux Server (<kernel revision>.x86_64)
root (hd0,0)
kernel /vmlinuz-<kernel revision>.x86_64 ro root=UUID=xxxxxxxx-xxxxxxxxxxxx-xxxxxxxxxxxx ro
rd_NO_LUKS LANG=ja_JP.UTF-8 rd_NO_MD SYSFONT=latarcyrhebsun16 KEYBOARDTYPE=pc KEYTABLE=jp106
rd_NO_LVM rd_NO_DM crashkernel=256M
initrd /initramfs-<kernel revision>.x86_64.img
```

b. Change setting of kdump to work with small memory
- Case of Red Hat Enterprise Linux 6.4
Add setting of cp command to core_collector of /etc/kdump.conf file
Edit the file "/etc/kdump.conf" as following:

```
core_collector cp --sparse=always
extra_bins /bin/cp
```

[Note] makedumpfile command cannot be used for core_collector because the command uses big memory and system may run out of memory.
- Case of Red Hat Enterprise Linux 6.5
Any changes is not needed for core_collector
[Note] RHEL6.5 improves memory usage of the makedumpfile command.

c. Reboot

5. Save the management information and configuration.
For details, see "5.7 Saving management and configuration information".
6. UPS battery monitor is set.
When the duration of life of the UPS battery is monitored: see "Setting for component replacement alert for PRIMEQUEST ". This document is downloaded from the following URL.
http://www.fujitsu.com/global/products/computing/servers/mission-critical/primequest/documents/manuals/
7. Watchdog Timer allows reboot OS in case that OS freezes. Rebooting OS is executed when the set time passes. For details, see "8.4 Automatic Partition Restart Conditions" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

4.5.5 After installation, connecting SAN and internal HDD/SSD

See PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN), for connecting SAN with internal HDD/SSD, after installation.
Moreover, for details on driver parameter, see readme of the driver supplied.

4.6 Procedure to install RHEL into internal HDD/SSD

This section briefly describes the procedure to install RHEL into internal HDD/SSD.
Start the installation after confirming the MMB configuration and successful to log in to the MMB.

4.6.1 Presetting

If necessary, the following settings are done.

1. Remove each internal HDD that is not the installation destination.
2. The setting of partition is checked by MMB.
   - Setting of configuration of SB/IOU
     See "3.4.1 Setting the partition configuration"
   - Setting of Console Redirection
     See "3.4.6 Settings of Console Redirection"
   - Video redirection: Enable
   - Virtual media: Enable
   - Setting of various modes
     See "3.4.5 Various mode settings"
3. [PCI ROM Priority] of BIOS is set.
   - For the UEFI Install
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "EFI Compatible ROM".
   - For the UEFI Install:
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "Legacy ROM".
     - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to "Enable" only for booting Device.
4. The I/O space is allocated in the SAS card and in the SAS RAID controllerRAID card.
   For details on allocation of I/O space, see "3.4.5 Various mode settings" and [Configure I/O Space Assignment] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

4.6.2 Preparing for Installation

As distribution DVD of RHEL is not provided beforehand while installing RHEL, the user who has subscribed the RHEL must create the DVD by himself.

Creating the RHEL Distribution DVD Image

Download the image file of distribution DVD by logging in to customer portal (https://access.redhat.com/) of Red Hat, Inc. by using other system.

Note
The image file of the distribution DVD differs with respect of the minor release and architecture (for Intel64). Therefore, download the intended DVD image file.

Remark
It is necessary to register in the customer portal of Red Hat, Inc. for subscription before downloading the file.

Preparing for Boot

All FC cables are removed.

4.6.3 Installation

The operating system installation with SVIM is explained.

There are the following types for operating system installation with SVIM. For the detailed procedure of each mode, see ServerView Suite ServerView Installation Manager.

TABLE 4.4 Operating system installation with SVIM

Mode	Functional Overview	Purpose
Quick mode	You can simply use the minimum settings necessary for operating system installation. This mode uses Fujitsu's recommended settings.	For easy installation.
Guide mode	You can specify setup information by following the instructions of the wizard. You can save the specified information in a configuration file for use during reinstallation.	For detailed setting of RAID or OS.

All the screenshots are display examples. The contents displayed may differ depending on system configuration.

Operations

1. The settings are done to boot the ServerView Suite DVD from virtual media for the partition.
   For details on configuration, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned ON.

   Note:
   It can be started by selecting "Force boot from DVD" by Boot Selector or it can be started from the virtual media by changing the boot order to DVD by UEFI.
   When operating system corresponds to the UEFI mode, the installation can be done in UEFI mode by changing the boot order according to the following procedure.
   a. After turning on the power supply of the partition, while the FUJITSU logo is displayed, press any key (such as [Space] key) except [Enter] key and the Boot Manager front page is displayed.

   b. The menu is selected on the Boot Manager front page in the following order. [Boot Maintenance Manager]-[Boot Options]-[Change Boot Order]-[Change the order]

   c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
   For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.
   For details on the setting method of boot order, see "■ Change Boot Order of "3.5.2 [Boot Options] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

   d. [Commit Changes and Exit] - [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed.
   In case of English, select "English".
4. In initial display window, click [Next] button without setting anything.
5. Select [Deployment] in [Welcome ServerView Installation Manager] window.
6. Select installation mode, select operating system to be installed and set the operating system.

   Remark
   The IP address of LAN cannot be set in setting operating system. Set IP address after installing the operation system.
7. Click [Start installation].
   The installation is started.
8. Replace with the installation medium of operating system according to the instructions of SVIM.

4.6.4 Configuring Bundled Software after Installation

Bundled software is configured after installing the operating system.

1. The trap destination from the partition is configured.
   Remark
   Configuring of the trap destination can be checked by using standard trap for SNMP service. For details, see "6.5.2 Configuring SNMP".

2. The trap destination and Mail destination through MMB are configured.
   In linkage with operations management software, it is configured only if necessary.
   - Configuring SNMP trap destination through MMB
     See "6.5.2 Set up of SNMP"
   - The report destination and the filter are set when Alarm E-Mail is configured.
     See "3.3.9 Set up of Alarm E-Mail"
3. OneCommand Manager is installed while installing FC card.

   a. By executing the following command, the libnl package information is displayed. Confirm that libnl is installed.

   ```
   #          rpm -qi libnl
   ```

   If libnl is not installed, search libnl package in installation media of distribution, and install libnl package by executing the following command.

```
#       rpm -ivh libnl-<version>-<release>.<arch>.rpm
```

Remark
Read the part of <version>, <release>, <arch> properly.

b. Download the driver/utility of FC Card from the following URL.
http://support.ts.fujitsu.com/

Note
Though PRIMERGY is described in the downloaded binary, driver/utility can be used by the PRIMEQUEST 2000 series.

c. The file to be downloaded is copied in an arbitrary directory of the PRIMEQUEST 2000 series and then extracted.

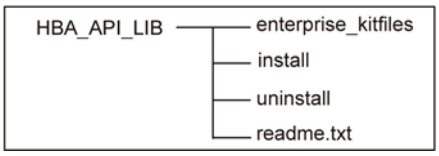
```
#       tar xvzf F1010350.tar.gz
```

d. The file given below is extracted.

Remark
For the method of installing “SNIA HBA API library”, see readme.txt extracted under HBA_API_LIB.

e. Reboot the partition after installation.

FIGURE 4.2 File Structure



4. The dump area is configured.
Confirm that hard disk has enough free space before collecting the memory dump.
After OS installation, do a setting of kdump as following:
a. Change the setting of Grub's parameter "crashkernel" to "256MB".
(example)
Edit the file “/etc/grub.conf” as following:

```
default=0
timeout=5
splashimage=(hd0,0)/grub/splash.xpm.gz
hiddenmenu
title Red Hat Enterprise Linux Server (<kernel revision>.x86_64)
root (hd0,0)
kernel /vmlinuz-<kernel revision>.x86_64 ro root=UUID=xxxxxxxx-xxxxxxxxxxxx-xxxxxxxxxxxx ro
rd_NO_LUKS LANG=ja_JP.UTF-8 rd_NO_MD SYSFONT=latarcyrhebsun16 KEYBOARDTYPE=pc KEYTABLE=jp106
rd_NO_LVM rd_NO_DM crashkernel=256M
initrd /initramfs-<kernel revision>.x86_64.img
```

b. Change setting of kdump to work with small memory
- Case of Red Hat Enterprise Linux 6.4
Add setting of cp command to core_collector of /etc/kdump.conf file
Edit the file "/etc/kdump.conf" as following:

```
core_collector cp --sparse=always
extra_bins /bin/cp
```

[Note] makedumpfile command cannot be used for core_collector because the command uses big memory and system may run out of memory.
- Case of Red Hat Enterprise Linux 6.5

Any changes is not needed for core_collector
[Note] RHEL6.5 improves memory usage of the makedumpfile command.

c. Reboot

5. NTP client is configured.
   NTP server on the operating system side is configured.
   For details, see "5.6 Setup of NTP client".
6. Save the management information and configuration.
   For details, see ""5.7 Saving management and configuration information".
7. UPS battery monitor is set.
   When the duration of life of the UPS battery is monitored: see "Setting for component replacement alert for PRIMEQUEST ". This document is downloaded from the following URL.
   http://www.fujitsu.com/global/products/computing/servers/mission-critical/primequest/documents/manuals/
8. Watchdog Timer allows reboot OS in case that OS freezes. Rebooting OS is executed when the set time passes. For details, see "8.4 Automatic Partition Restart Conditions" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

4.6.5 After installation, connecting SAN with internal HDD/SSD

See PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN), for connecting SAN with internal HDD/SSD, after installation.
Moreover, for details on driver parameter, see readme of the driver supplied.

4.7 Procedure to install VMware 5.x on the SAN storage device

This section briefly describes the procedure by which VMware 5.x is installed on the SAN storage device. Start the installation after confirming the MMB configuration and successful to log in to the MMB. For the details of SAN storage and FC card, Converged Network Adapter and NIC for iSCSI Boot settings, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).

4.7.1 Presetting

Set the following if necessary.

1. Set the LUN of the SAN storage device.
2. [PCI ROM Priority] of BIOS is set.
   - For the UEFI Install
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "EFI Compatible ROM".
   - For the UEFI Install:
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "Legacy ROM".
     - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to "Enable" only for booting Device.
3. Set the BIOS to recognize LUN of the FC card, Converged Network Adapter and NIC for iSCSI Boot.
   For setting the FC card, see "Chapter 2 Setting of fiber channel card (FC card)" of PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).
4. Check the setting of the partition by MMB after removing the internal HDD/SSD of PRIMEQUEST.
   - SB/IOU configuration is set
     See "3.4.1 Setting the partition configuration"
   - Console redirection is set
     See "3.4.6 Settings of Console Redirection"
   - Video redirection: Enable
   - Virtual media: Enable
   - Various modes are set

See "3.4.5 Various mode settings"

5. Connect only the LUN which installs the SAN storage device to the partition of PRIMEQUEST.
   For the setting of SAN storage device, see the manual attached with the SAN storage device.
6. Allocate the I/O space in the FC card for boot path and in the SAS RAID controllerRAID card.
   For details on allocation of the I/O space, see "3.4.5 Various mode settings" and "5.5.1 [Configure I/O Space Assignment] menu" of PRIMEQUEST 2000 Series Tool Reference (CA92344-0539).
7. Set PCI Address Mode to PCI Bus Mode by MMB Web-UI.
   For details on PCI Address Mode setting, see "1.3.8 [Partition#x] Menu" of PRIMEQUEST 2000 series Tool Reference Manual (CA92344-0539).

4.7.2 Preparation of installation

Additionally, see the VMware information, at the time of preparation of the installation.
For the VMware information, contact the distributor where you purchased your product, or your sales representative.

The following preparation is done just before the installation.

1. The following disk image is prepared.
   Media of VMware 5.x
2. The FC cable is made a single path (wire connection of only 1 FC cable).

4.7.3 Installation of VMware 5.x

The operating system installation with SVIM is explained.
There are the following types for operating system installation with SVIM. For the detailed procedure of each mode, see ServerView Suite ServerView Installation Manager.

TABLE 4.5 Operating system installation with SVIM

Mode	Functional Overview	Purpose
Quick mode	You can simply use the minimum settings necessary for operating system installation. This mode uses Fujitsu's recommended settings.	For easy installation.
Guide mode	You can specify setup information by following the instructions of the wizard. You can save the specified information in a configuration file for use during reinstallation.	For detailed setting of RAID or OS.

All the screenshots are display examples. The contents displayed may differ depending on system configuration.

Operations

1. The settings are done to boot the ServerView Suite DVD from virtual media for the partition.
   For details on configuration, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned ON.

Note:
It can be started by selecting "Force boot from DVD" by Boot Selector or it can be started from the virtual media by changing the boot order to DVD by UEFI.
When the operating system is applicable for UEFI mode, the installation can be done in UEFI mode by changing the boot order according to the following procedure.

a. After turning on the power supply of the partition, while the FUJITSU logo is displayed, press any key (such as [Space] key) except [Enter] key and the Boot Manager front page is displayed.

b. The menu is selected on the Boot Manager front page in the following order. [Boot Maintenance Manager]-[Boot Options]-[Change Boot Order]-[Change the order]

c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
   For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.
   For details on the setting method of boot order, see "■ Change Boot Order of "3.5.2 [Boot Options] menu" of

PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

d. [Commit Changes and Exit] - [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed.
   In case of English, select “English”.
4. In initial display window, click [Next] button without setting anything.
5. Select [Deployment] in [Welcome ServerView Installation Manager] window.
6. Select installation mode, select operating system to be installed and set the operating system.

   Remark
   The IP address of LAN cannot be set in setting operating system. Set IP address after installing the operation system.
7. Click [Start installation].
   The installation is started.
8. Replace with the installation medium of operating system according to the instructions of SVIM.

4.7.4 Setting of Software Watchdog.

Watchdog Timer allows reboot OS in case that OS freezes. Rebooting OS is executed when the set time passes, For details, see “8.4 Automatic Partition Restart Conditions” of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

4.7.5 VMware 5.x Installation completion.

Reboot the partition of the PRIMEQUEST 2000 series when the setting is completed.

4.7.6 Installation of Bundled Software

For details on bundled software, see [D.2 VMware 5.x Bundled Software Installation]

4.8 Procedure to install VMware 5.x into internal HDD/SSD

This section describes the procedure of installing internal HDD/SSD for VMware 5.x.
Start the installation after confirming the MMB configuration and successful to log in to the MMB.

4.8.1 Presetting

Set the following if necessary.

1. Check the partition settings in the MMB after removing internal HDD/SSD of PRIMEQUEST
   - Setting of configuration of SB/IOU
     See “3.4.1 Setting the partition configuration”
   - Setting of Console Redirection
     See “3.4.6 Settings of Console Redirection”
   - Video redirection: Enable
   - Virtual media: Enable
   - Setting of various modes
     See “3.4.5 Various mode settings”
2. [PCI ROM Priority] of BIOS is set.
   - For the UEFI Install
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to ”EFI Compatible

ROM".
- For the UEFI Install:
  - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "Legacy ROM".
  - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to "Enable" only for booting Device.

3. The I/O space is allocated in the SAS card and in the SAS RAID controllerRAID card.
   For details on allocation of I/O space, see "3.4.5 Various mode settings" and [Configure I/O Space Assignment] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).
4. Set PCI Address Mode to PCI Bus Mode through MMB Web-UI.
   For details on PCI Address Mode setting, see "1.3.8 [Partition#x] Menu" of PRIMEQUEST 2000 series Tool Reference Manual (CA92344-0539).

4.8.2 Preparation of installation

See the VMware information thoroughly at the time of installation preparation.
For the VMware product, please contact who you purchased the product from.
Set the following.

1. The following disk images are prepared.
   VMware 5.x media
2. Remove all FC cables.
3. Mount the following disk image by connecting the video redirection.
4. Configure the RAID environment.
   For details, see the *MegaRAID SAS Software*, the *MegaRAID SAS Device Driver Installation*, or the LSI MegaRAID (R) SAS Software contained on the SVS DVD.
5. Change the boot order, and set DVD Boot to the top priority of the starting order.
   For details, see "1.3.1 [Power Control] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

4.8.3 VMware 5.x installation

This section describes the installation of the operating system by SVIM.
The type of the operating system installation by SVIM includes the following types. For the detailed procedure of the concerned mode, see ServerView Suite ServerView Installation Manager.

TABLE 4.6 Operating system installation by SVIM

Mode	Functional Overview	Purpose
Quick mode	You can simply use the minimum settings necessary for operating system installation. This mode uses Fujitsu's recommended settings.	For easy installation.
Guide mode	You can specify setup information by following the instructions of the wizard. You can save the specified information in a configuration file for use during reinstallation.	For detailed setting of RAID or OS.

All the screenshots are display examples and the displayed contents differs depending on the system configuration.

Operations

1. The settings are done to boot the ServerView Suite DVD from virtual media for the partition.
   For details on configuration, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned ON.

Note:
It can be started by selecting "Force boot from DVD" by Boot Selector or it can be started from the virtual media by changing the boot order to DVD by UEFI.
When operating system corresponds to the UEFI mode, the installation can be done in UEFI mode by changing the boot order according to the following procedure.

a. After turning on the power supply of the partition, while the FUJITSU logo is displayed, press any key (such as [Space] key) except [Enter] key and the Boot Manager front page is displayed.

b. The menu is selected on the Boot Manager front page in the following order. [Boot Maintenance Manager]-[Boot Options]-[Change Boot Order]-[Change the order]

c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.
For details on the setting method of boot order, see "■ Change Boot Order of "3.5.2 [Boot Options] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

d. [Commit Changes and Exit] - [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed.
In case of English, select "English".
4. In initial display window, click [Next] button without setting anything.
5. Select [Deployment] in [Welcome ServerView Installation Manager] window.
6. Select installation mode, select operating system to be installed and set the operating system.

Remark
The IP address of LAN cannot be set in setting operating system. Set IP address after installing the operation system.

7. Click [Start installation].
The installation is started.
8. Replace with the installation medium of operating system according to the instructions of SVIM.

4.8.4 Setting of software watchdog

Watchdog Timer allows reboot OS in case that OS freezes. Rebooting OS is executed when the set time passes, For details, see "8.4 Automatic Partition Restart Conditions" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).

4.8.5 Completion of VMware 5.x installation

Reboot the partition of PRIMEQUEST 2000 series after the completion of setting.

4.8.6 Installation of the bundled software

For the installation of bundled software, see "Installation of D.2 VMware 5.x bundled software".

4.9 Procedure of Hyper-V installation

Install Hyper-V after installing the operating system (Windows Server 2008 R2, Windows Server 2012 or Windows Server 2012 R2).

4.10 Procedure of KVM installation

Install KVM after installing the operating system (Linux RHEL6).
See the following for the installation procedure of KVM.
PRIMEQUEST 2000 Series Simple Construction Guide (Linux/KVM edition).

Note
[PRIMEQUEST2400E/2800E only]
For RHEL6 KVM, Raid Controller Card/HDD/SSD on Non Home SB can't assign to KVM guest using PCI passthrough function.

4.11 Procedure to install SUSE Linux Enterprise Server 11 Service Pack 3 into the SAN Storage Unit

This section describes the procedures for installing SUSE Linux Enterprise Server 11 Service Pack 3 (referred to below as SLES11 SP#) on the SAN storage unit. Confirm the MMB configuration and successful login to the MMB before starting the installation.
For details on configuring the SAN storage unit and FC card , Converged Network Adapter and NIC for iSCSI Boot , see the *PRIMEQUEST 1000 Series SAN Boot Environment Configuration Manual* (C122-E206EN).

4.11.1 Presetting

Set the following if necessary.

1. Set the LUN of the SAN storage device.
2. [PCI ROM Priority] of BIOS is set.
   - For the UEFI Install
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "EFI Compatible ROM".
   - For the UEFI Install:
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "Legacy ROM".
     - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to "Enable" only for booting Device.
3. Set the BIOS to recognize LUN of the FC card, Converged Network Adapter and NIC for iSCSI Boot.
   For setting the FC card, Converged Network Adapter and NIC for iSCSI Boot, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).
4. Check the setting of the partition by MMB after removing the internal HDD/SSD of PRIMEQUEST.
   - SB/IOU configuration is set
     See "3.4.1 Setting the partition configuration"
   - Console redirection is set
     See "3.4.6 Settings of Console Redirection"
   - Video redirection: Enable
   - Virtual media: Enable
   - Various modes are set
     See "3.4.5 Various mode settings"
5. Connect only the LUN which installs the SAN storage device to the partition of PRIMEQUEST.
   For the setting of SAN storage device, see the manual attached with the SAN storage device.
6. Allocate the I/O space in the FC card for boot path and in the SAS RAID controllerRAID card.
   For details on allocation of the I/O space, see "3.4.5 Various mode settings" and "5.5.1 [Configure I/O Space Assignment] menu" of PRIMEQUEST 2000 Series Tool Reference (CA92344-0539).

4.11.2 Preparation of installation

Prepare the SLES11 SP3 installation DVD.

Preparation for boot
The FC cable is made single path (connect only one FC cable).

4.11.3 Installation

The operating system installation with SVIM is explained.

There are the following types for operating system installation with SVIM. For the detailed procedure of each mode, see ServerView Suite ServerView Installation Manager.

TABLE 4.7 Operating system installation with SVIM

Mode	Functional Overview	Purpose
Quick mode	You can simply use the minimum settings necessary for operating system installation. This mode uses Fujitsu's recommended settings.	For easy installation.
Guide mode	You can specify setup information by following the instructions of the wizard. You can save the specified information in a configuration file for use during reinstallation.	For detailed setting of RAID or OS.

All the screenshots are display examples. The contents displayed may differ depending on system configuration.

Operations

1. The settings are done to boot the ServerView Suite DVD from virtual media for the partition.
   For details on configuration, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned ON.
   Note:
   "Force boot from DVD" can be selected by the Boot Selector and can be activated from DVD or it can be activated from the DVD drive by changing the boot order into DVD with UEFI.
   When operating system corresponds to the UEFI mode, the installation can be done in UEFI mode by changing the boot order according to the following procedure.
   a. After turning on the power supply of the partition, while the FUJITSU logo is displayed, press any key (such as [Space] key) except [Enter] key and the Boot Manager front page is displayed.

   b. The menu is selected on the Boot Manager front page in the following order. [Boot Maintenance Manager]-[Boot Options]-[Change Boot Order]-[Change the order]

   c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For details on the setting method of boot order, see "■ Change Boot Order of "3.5.2 [Boot Options] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

   d. [Commit Changes and Exit] - [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed.
   In case of English, select "English".
4. In initial display window, click [Next] button without setting anything.
5. Select [Deployment] in [Welcome ServerView Installation Manager] window.
6. Select installation mode, select operating system to be installed and set the operating system.
   Remark
   The IP address of LAN cannot be set in setting operating system. Set IP address after installing the operation system.
7. Click [Start installation].
   The installation is started.
8. Replace with the installation medium of operating system according to the instructions of SVIM.

4.11.4 Configuring Bundled Software after Installation

After completing OS installation, configure the bundled software.

4.11.5 After installation, connecting SAN and internal HDD/SSD

For details on connecting the SAN and internal HDD after the installation, see the *PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual* (C122-E206EN). Also, for details on driver parameters, see the readme file that comes with the driver.

4.12 Procedure to install SUSE Linux Enterprise Server 11 Service Pack 3 into the Internal HDD

This section concisely describes the procedures for installing SUSE Linux Enterprise Server 11 Service Pack 3 (referred to below as SLES11 SP3) on the internal HDD. Confirm the MMB configuration and successful login to the MMB before starting the installation.

4.12.1 Presetting

If necessary, the following settings are done.

1. Remove each internal HDD that is not the installation destination.
2. The setting of partition is checked by MMB.
   - Setting of configuration of SB/IOU
     See "3.4.1 Setting the partition configuration"
   - Setting of Console Redirection
     See "3.4.6 Settings of Console Redirection"
   - Video redirection: Enable
   - Virtual media: Enable
   - Setting of various modes
     See "3.4.5 Various mode settings"
3. [PCI ROM Priority] of BIOS is set.
   - For the UEFI Install
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "EFI Compatible ROM".
   - For the UEFI Install:
     - Set [Device Manager]-[PCI Subsystem Configuration]-[PCI ROM Priority] of BIOS menu to "Legacy ROM".
     - Set [Device Manager]-[PCI Subsystem Configuration]-[OpROM Scan Configuration] of BIOS menu to "Enable" only for booting Device.
4. The I/O space is allocated in the SAS card and in the SAS RAID controllerRAID card.
   For details on allocation of I/O space, see "3.4.5 Various mode settings" and "5.5.1 [Configure I/O Space Assignment] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

4.12.2 Preparing for Installation

Prepare the SLES11 SP3 installation DVD.

4.12.3 Installation

The operating system installation with SVIM is explained.

There are the following types for operating system installation with SVIM. For the detailed procedure of each mode, see ServerView Suite ServerView Installation Manager.

TABLE 4.8 Operating system installation with SVIM

Mode	Functional Overview	Purpose
Quick mode	The operating system can be installed with the recommendation of Fujitsu only by setting minimum required limits.	It is used when the operating system is to be readily installed.

Guide mode	The setup information is set following the wizard. The information which is set is saved in the configuration file, and it can be used during reinstallation.	It is used when the details of RAID and the operating system are set.

All the screenshots are display examples. The contents displayed may differ depending on system configuration.

Operations

1. The settings are done to boot the ServerView Suite DVD from virtual media for the partition.
   For details on configuration, see"1.6.2 Remote control operation (BMC)" of PRIMEQUEST 2000 series Administration Manual (CA92344-0537).
2. The power supply of the partition is turned ON.
   Note:
   "Force boot from DVD" can be selected by the Boot Selector and can be activated from DVD or it can be activated from the DVD drive by changing the boot order into DVD with UEFI.
   When operating system corresponds to the UEFI mode, the installation can be done in UEFI mode by changing the boot order according to the following procedure.
   a. After turning on the power supply of the partition, while the FUJITSU logo is displayed, press any key (such as [Space] key) except [Enter] key and the Boot Manager front page is displayed.

   b. The menu is selected on the Boot Manager front page in the following order. [Boot Maintenance Manager]-[Boot Options]-[Change Boot Order]-[Change the order]

   c. For UEFI aware OS, UEFI: Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For Legacy OS, Fujitsu Virtual CDROMx xxx is set at the upper-most step.
      For details on the setting method of boot order, see "■ Change Boot Order of "3.5.2 [Boot Options] menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

   d. [Commit Changes and Exit] - [Reset System] is specified and the partition is rebooted.

3. After a period of time, the language selection window is displayed.
   In case of English, select "English".
4. In initial display window, click [Next] button without setting anything.
5. Select [Deployment] in [Welcome ServerView Installation Manager] window.
6. Select installation mode, select operating system to be installed and set the operating system.

   Remark
   The IP address of LAN cannot be set in setting operating system. Set IP address after installing the operation system.
7. Click [Start installation].
   The installation is started.
8. Replace with the installation medium of operating system according to the instructions of SVIM.

4.12.4 Configuring Bundled Software after Installation

After completing OS installation, configure the bundled software.

4.12.5 After installation, connecting SAN and internal HDD/SSD

See PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN), for connecting SAN with internal HDD/SSD, after installation.
Moreover, for details on driver parameter, see readme of the driver supplied.

CHAPTER 5 Work after Operating System installation

This chapter describes every setting that is required after the installation of the operating system of the PRIMEQUEST 2000 Series

5.1 Types of work

Content and type of operations that are to be implemented after installation of the operating system are given below.

TABLE 5.1 Type of operations

Task	Installed operating system	See
Setting of SVAgent	Linux, Windows	5.2 Setting of SVS (SVagent/SVAgentless Service/SVmco)
Setting of sadump	Linux	5.3 Setting of sadump
Setting of Dump environment	Windows	5.4 Setup of dump environment (Windows)
Setting of Dump environment	Linux	5.5 Setup of dump environment (Linux)
Setting of NTP client	Linux	5.6 Setup of NTP client
Management information of MMB / Save configuration information of BIOS	Linux, Windows	"5.7 Saving management and configuration information
Setting of Write Policy of SAS array controller card.	Linux, Windows	"5.8 Write Policy" recommended setting of SAS array controller card"

5.2 Setting of SVS (SVagent/SVAgentless Service/SVmco)

If SVS installation was selected settings for following products must be done after installation of OS. See the following manuals for the details of the settings of SVagent/SVmco.
SVmco is necessary, only when you use PRIMECLUSTER linkage

- SVagent:
  ServerView Operations Manager Installation ServerView Agents for Linux
  ServerView Operations Manager Installation ServerView Agents for Windows
- SVmco:
  ServerView Mission Critical Option User Manual.
- SVAgentless Service on SUSE Linux Enterprise Server 11
  In case of SUSE Linux Enterprise Server 11, it is necessary to extend the syslog-ng configuration file
  1. Insert the following lines into the file /etc/syslog-ng/syslog-ng.conf:
     destination hwlog { pipe("/dev/HWLog/syslog_fifo"); };
     log { source(src); destination(hwlog); };
  2. Start YaST and select Novell AppArmor – Edit Profile.
  3. Choose the name of the active syslog daemon (/sbin/syslog-ng or /sbin/syslogd) and click Next.
  4. Enter /dev/HWLog/syslog_fifo in the Enter or modify File-name field.
  5. Under Permissions activate the Read and Write option.
  6. Save this entry.
  7. Restart AppArmor by:
     /etc/init.d/boot.apparmor restart
     Due to a bug in SLES11 it is possible, that the AppArmor profile /etc/apparmor.d/sbin.syslog-ng contains an invalid statement. The following line

@{CHROOT_BASE} =
has to be changed to
@{CHROOT_BASE} = ""
AppArmor has to restart after this change.
8. Restart syslog services by:
/etc/init.d/syslog restart

5.3 Setting of sadump

In sadump, the following items are set for each partition.
- Validation of sadump
- Collection address of dump
- Compression at the time of dump collection
- Movement after dump collection
- Re-use of dump collection address.

The sadump setting is executed on the BIOS set-up menu.
Before the setting is executed, it is necessary to reserve the area of the damp device which becomes the collection address of dump. When there is a system fault, the register information and memory contents are output to the dump device. Due to this reason, the capacity of the device that performs dump output is determined, so as to match the memory size. The required area is obtained by the estimation given below and it is reserved.

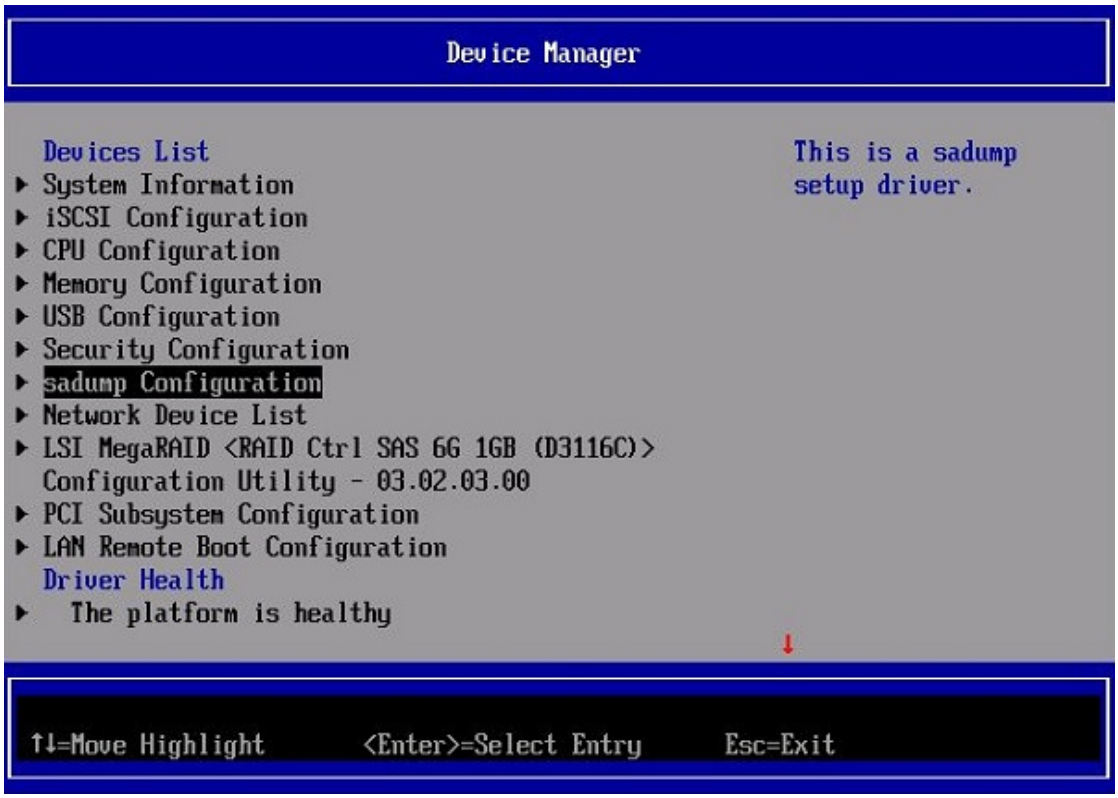
Amount of memory installed +512 MB

The dump device can use the disk and the disk partition. In case of dump device created for the disk partition, create the disk partition when installing the operating system.
In case of setting the device on ETERNUS to dump device. It is necessary to execute UEFI driver setting in advance.
For the details of setting procedure see, PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).
All the screenshots are display examples. The display contents differ according to the system configuration.
For the details of sadump settings, see “Chapter 5 Setting of sadump environment” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).
All the windows given here are display examples. The display contents differ according to the system configuration.

Operations

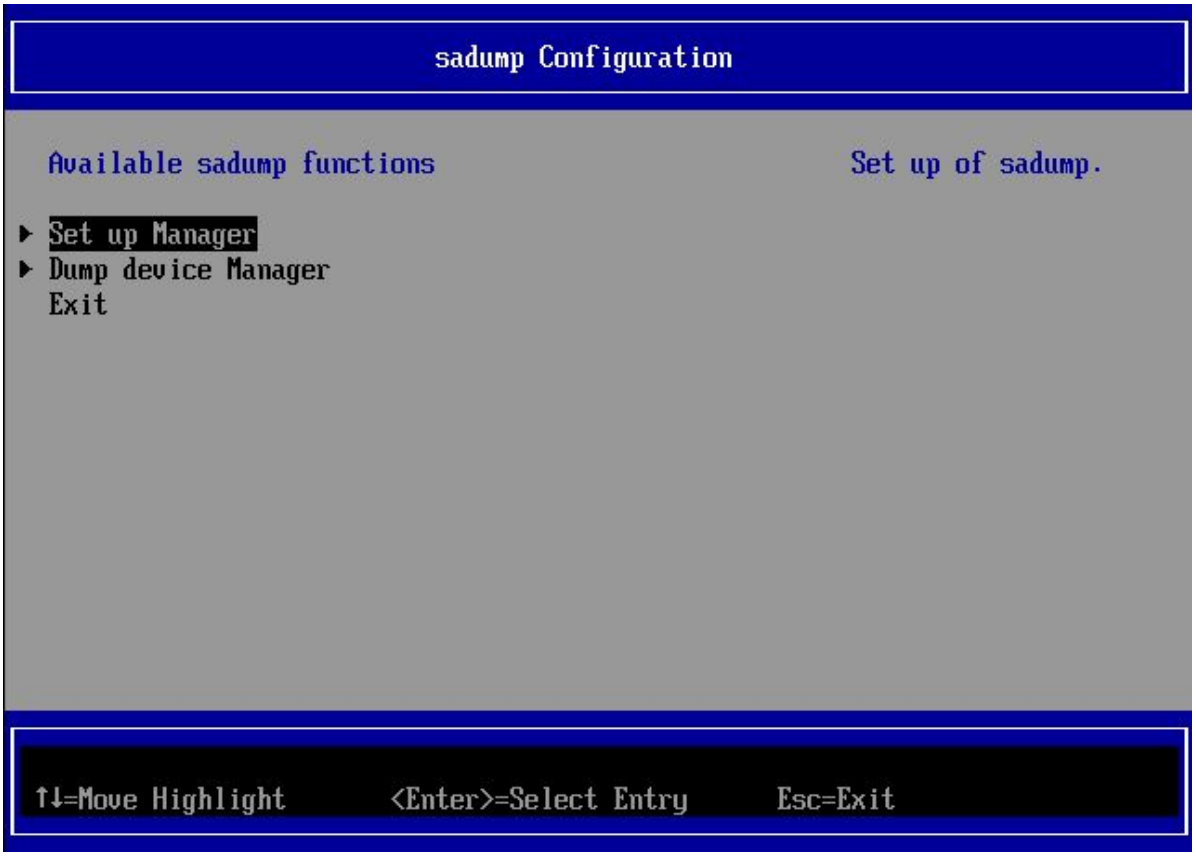
1. Device Manager menu of UEFI is displayed.
   For the details of device manager menu display, see, “Chapter 3 UEFI Menu Operations” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539)

FIGURE 5.1 Example of Device Manager Menu



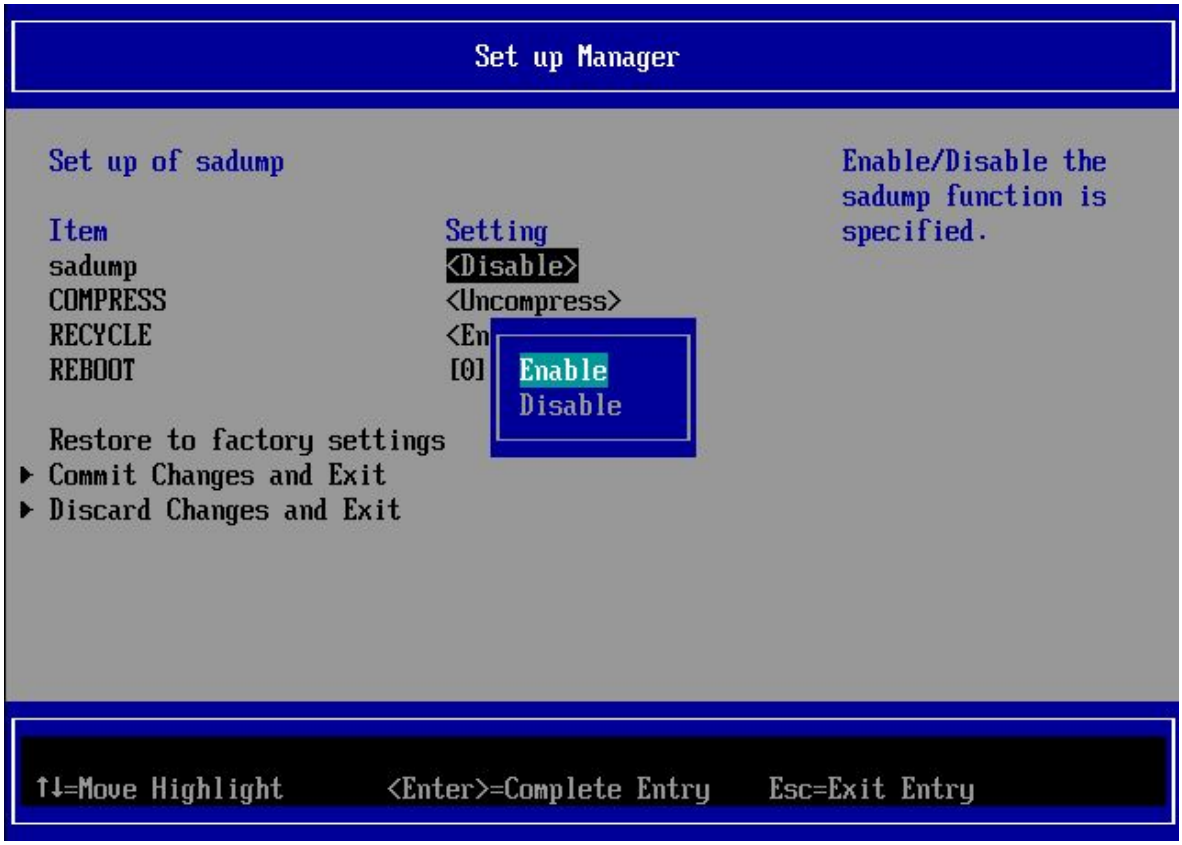
2. Select [sadump Configuration] and press [Enter] key
→Main menu (sadump) is displayed

FIGURE 5.2 Main menu (sadump)



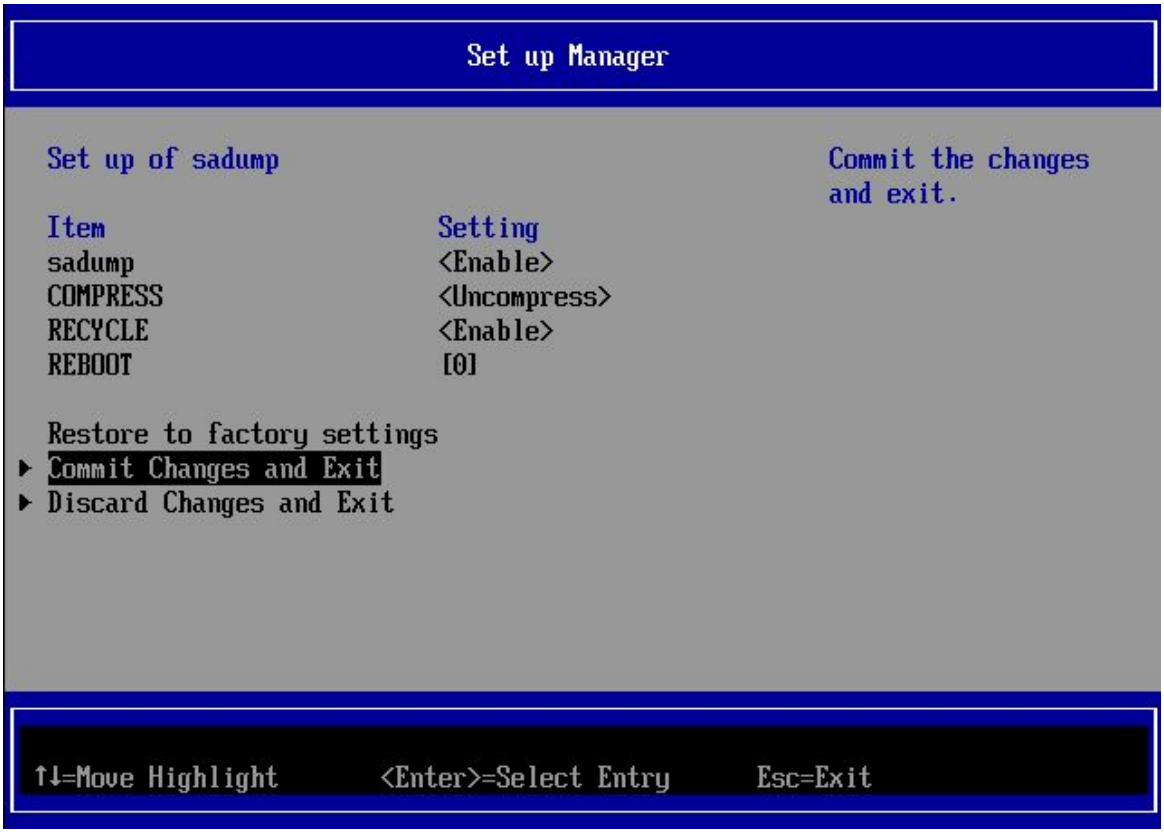
3. Select [Set-up Manager] and press [Enter] key
→sadump set-up menu is displayed.

FIGURE 5.3 sadump set-up menu



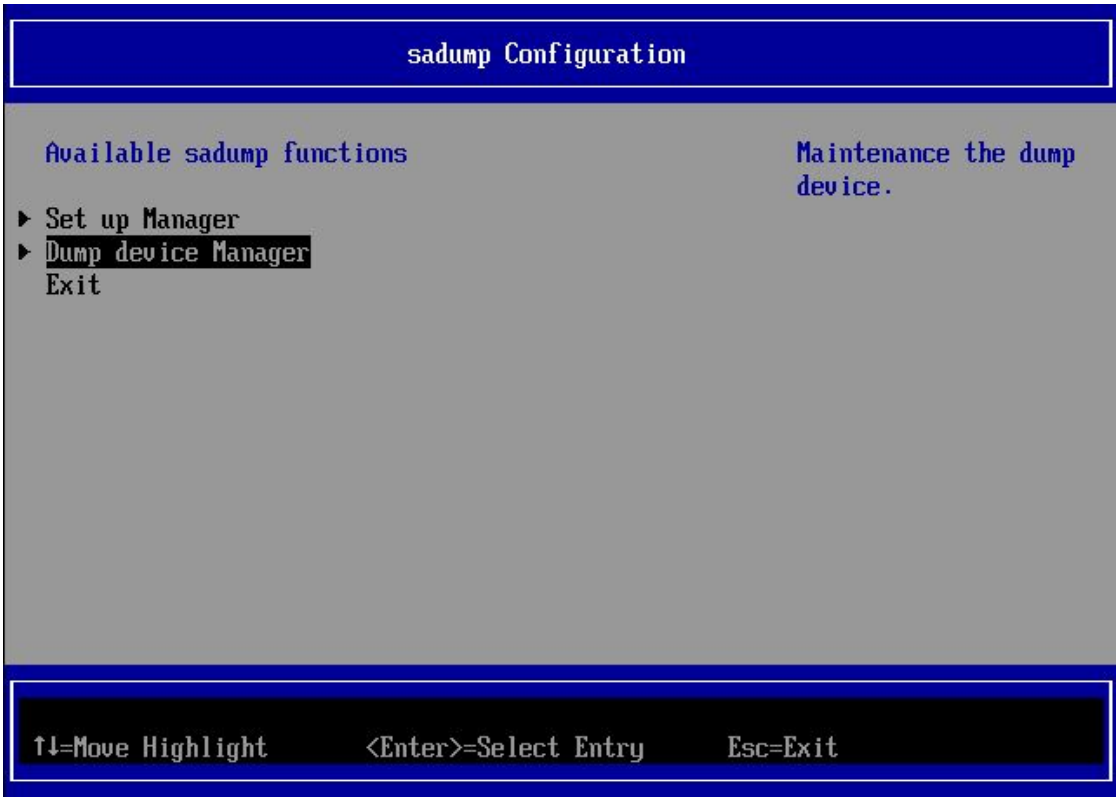
4. Select [Enabled] on [sadump].

FIGURE 5.4 sadump set-up menu



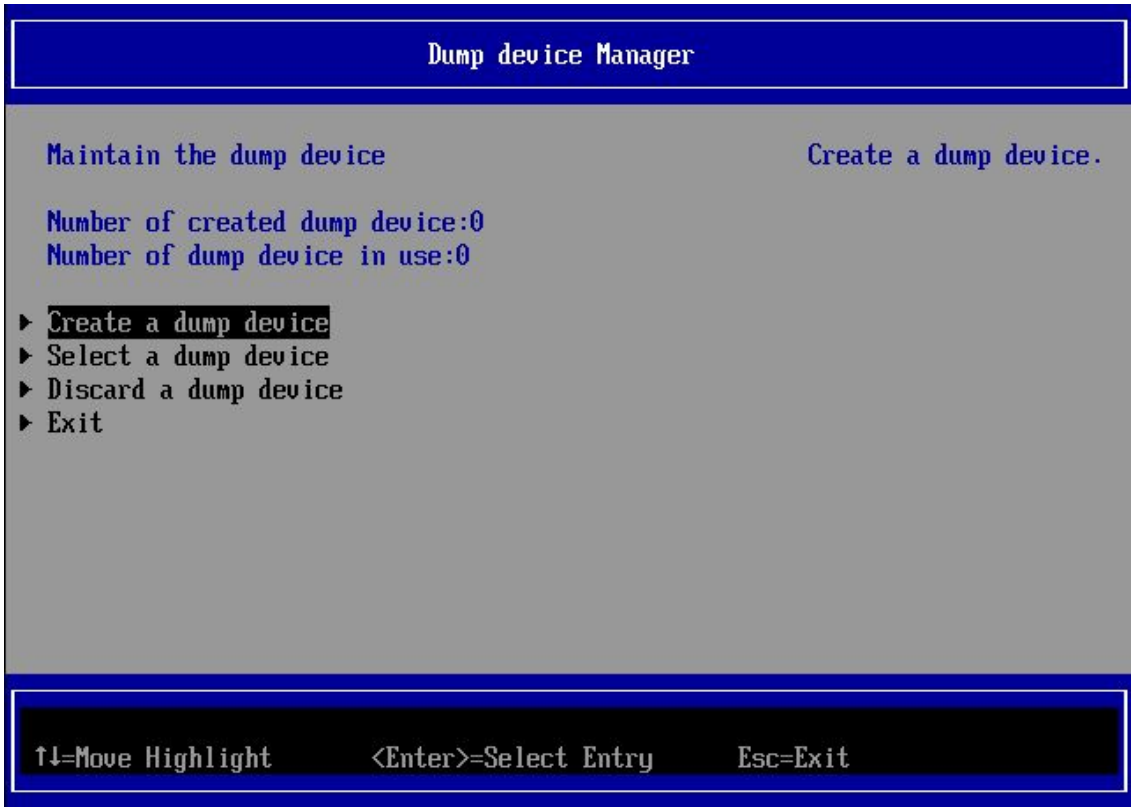
5. Select [Commit Changes and Exit] and press [Enter].
   → Return to the main menu (sadump) after the settings are reflected.

FIGURE 5.5 Main menu (sadump)



6. Select [Dump device Manager] on main menu (sadump), and press [Enter] key.
→The dump device maintenance menu is displayed.

FIGURE 5.6 Dump Device Maintenance Menu



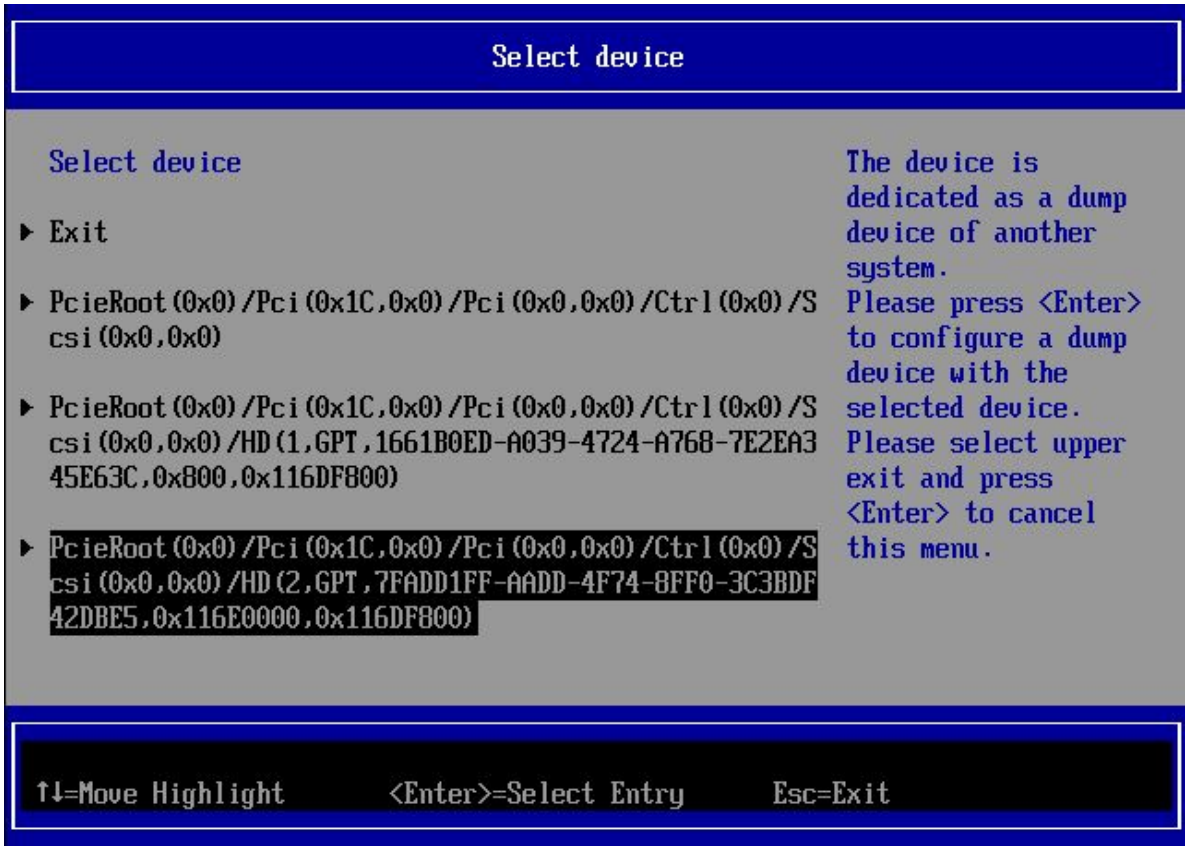
7. Select [Create a dump device], and press [Enter] key.
→The dump device configuration menu is displayed.

FIGURE 5.7 Dump Device Structure Menu

Create a dump device
Create a dump device
Create mode
<Single>
Disk selection
Exit
In the case of the single device configuration, Move to Disk/Partition Selection Menu.
In the case of the multiple devices configuration, Move to Disk Selection Menu.
↑↓=Move Highlight
<Enter>=Select Entry
Esc=Exit

8. Select [Disk selection], and press [Enter] key.
→The dump device selection menu is displayed.

FIGURE 5.8 Dump Device Selection Menu



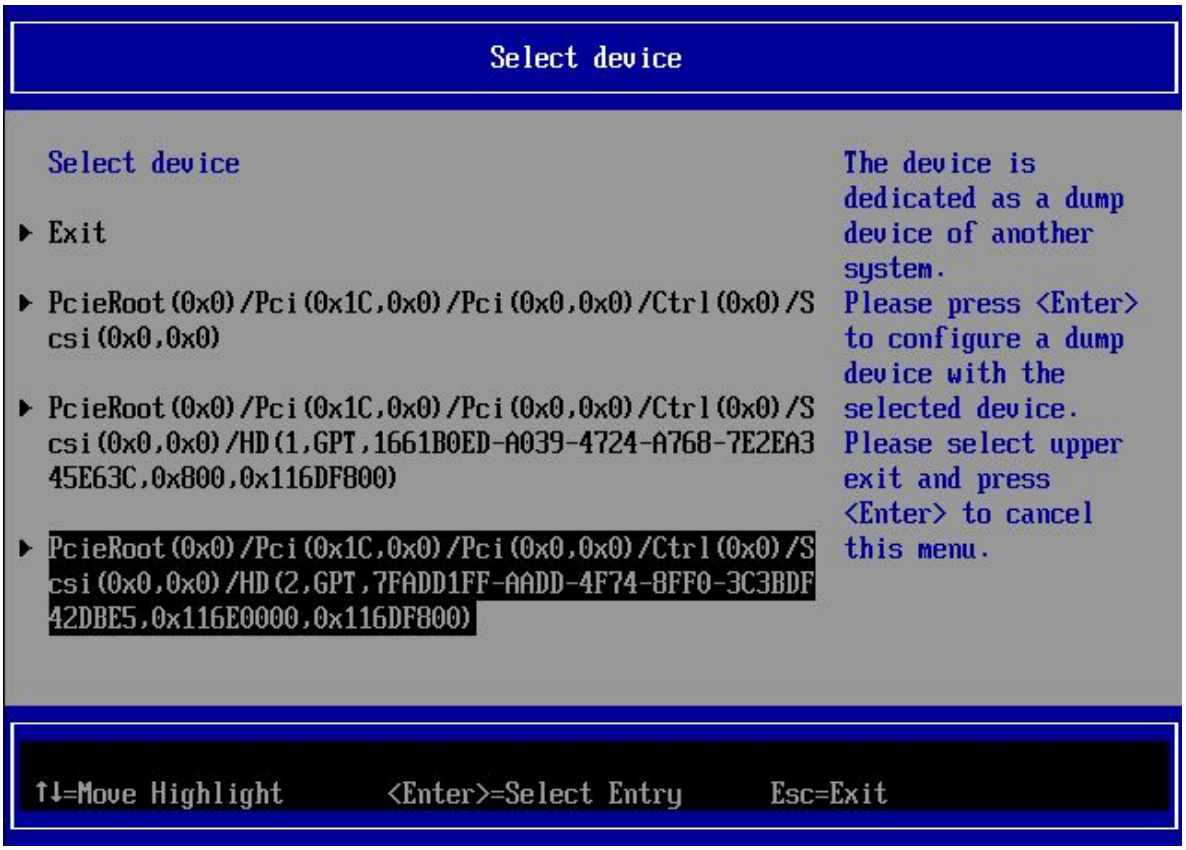
9. Select the disk or the disk partition, and set the disk or the disk partition where the dump device is to be configured.
   →The dump device selection menu is displayed.

CAUTION

(Data corruption)
When the dump device is selected, reconfirm whether the selection of disk is correct. If the operation is executed with an incorrect disk selection, data would be corrupted.

Remark
For the ACPI name that shows the disk or the disk partition, see "3.6 Device pass" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

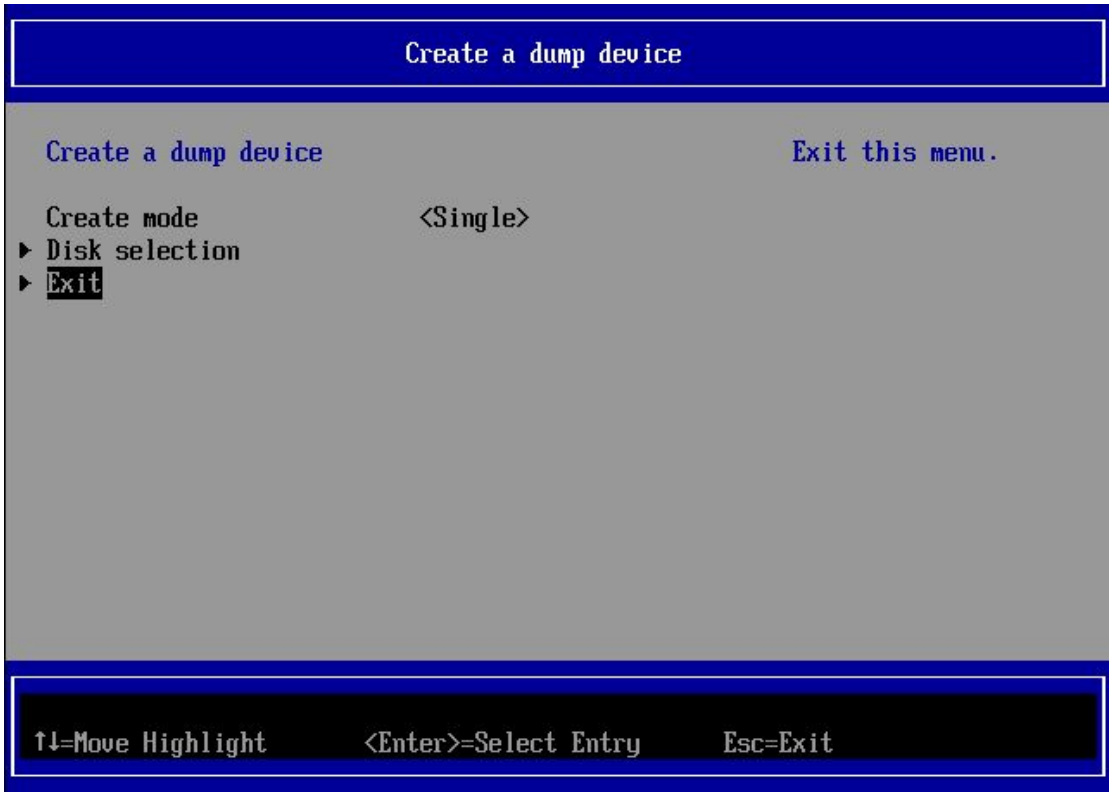
FIGURE 5.9 Dump Device Selection Menu



10. Press [Enter] key.
→The dump device is created. Return to dump device configuration menu.

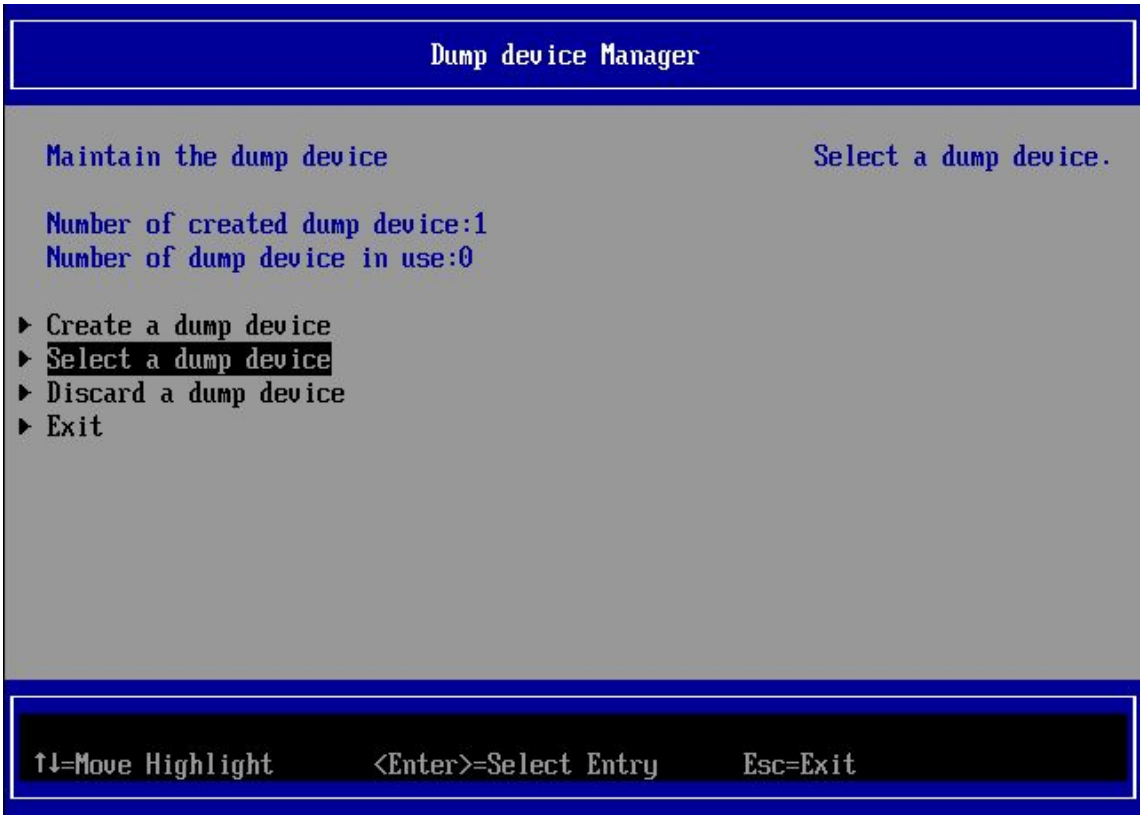
Warning
When the dump device is created, it is initialized. Depending on the size of the selected disk or that of the disk partition, the time required for initialization would be different. In some cases, it takes time for initialization, and then it takes a few minutes or more to change to the next window.

FIGURE 5.10 Dump Device Structure Menu



11. Select [Exit] and press [Enter] key.
→ Return to the dump device maintenance menu.

FIGURE 5.11 Dump Device Maintenance Menu

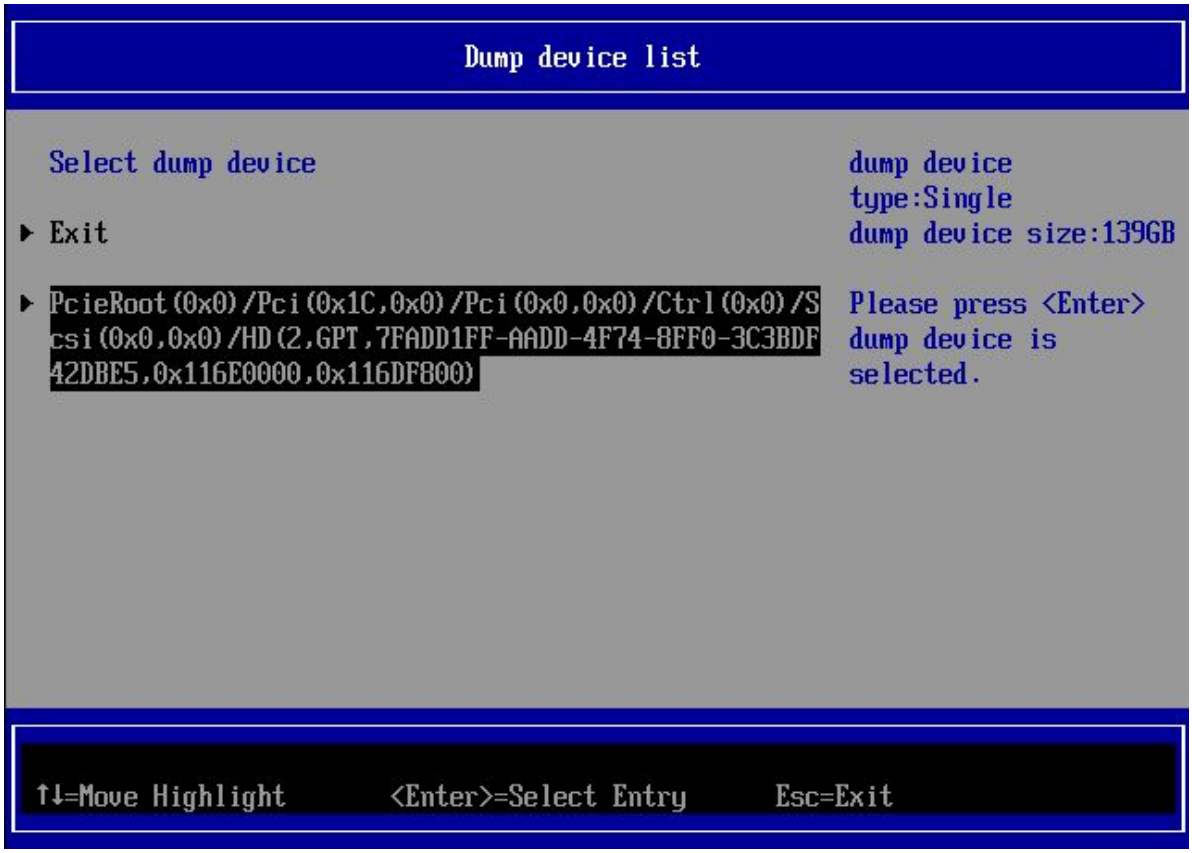


12. Select [Select a dump device] on the dump device maintenance menu and press [Enter] key.
→The dump device set up menu is displayed.

FIGURE 5.12 Dump Device Setting Menu

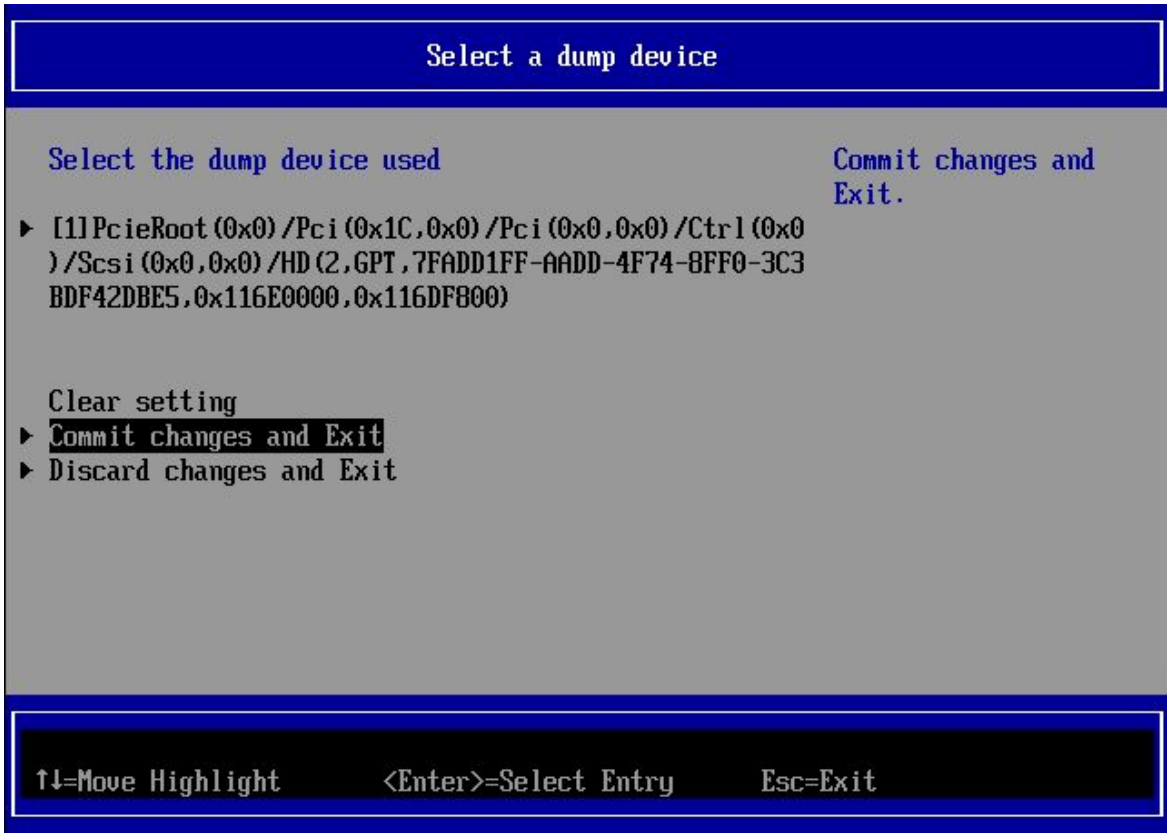
13. Select the first dump device is specified. [1] and press [Enter] key.
→ The dump device list menu is displayed.

FIGURE 5.13 Dump Device List Menu



14. Select the disk used for the dump device or the disk partition and press [Enter] key.
→The dump device is decided, and the action returns to the dump device set menu.

FIGURE 5.14 Dump Device Setting Menu

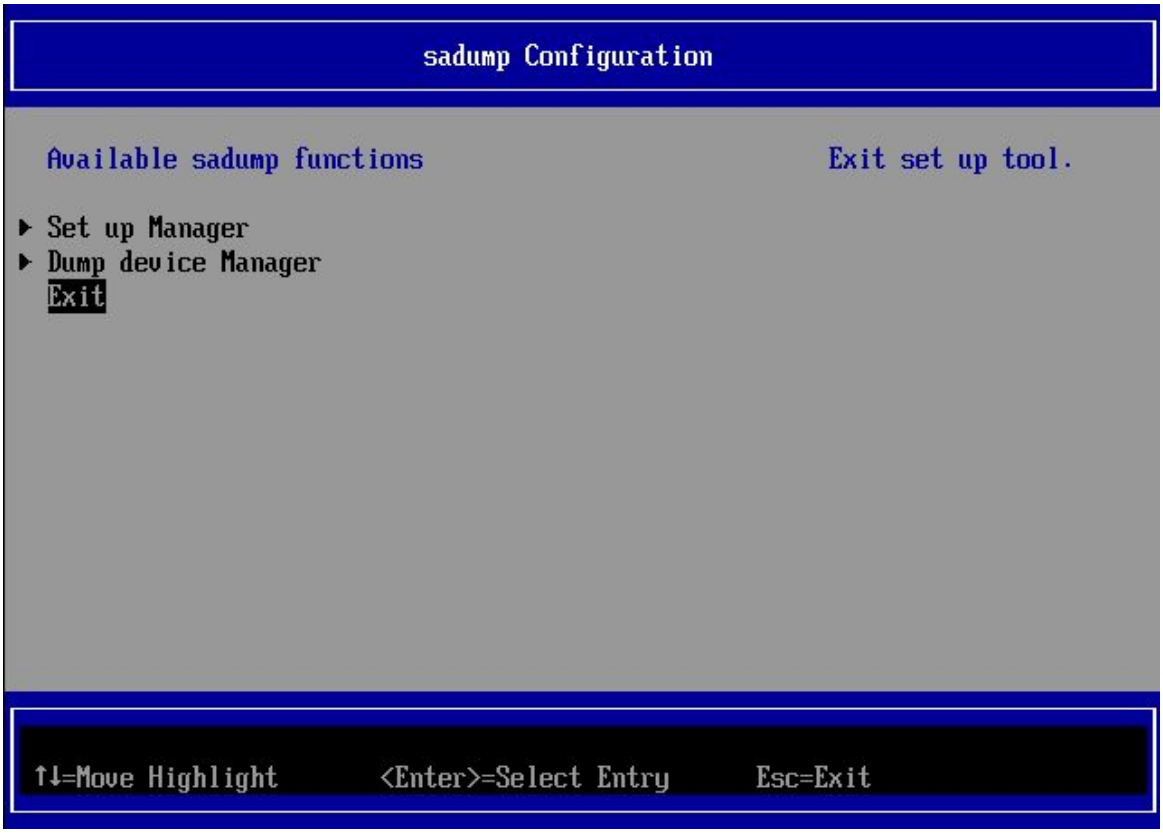


15. Select [Commit Changes and Exit] and press [Enter] key.
→ The dump device is decided, and the action returns to the dump device maintenance menu.

FIGURE 5.15 Dump Device Maintenance Menu

16. Select [Exit], and press [Enter] key
→ The action returns to the main menu (sadump)

FIGURE 5.16 Main Menu (sadump)



17. Select [Exit], and press [Enter] key
→ Setting of sadump is completed.

5.4 Setup of dump environment (Windows)

Windows OS provides memory dump function as standard. For obtaining the dump, it is necessary to secure the disc area in advance.
For details regarding the setup of dump environment, see “11.4.3.Setup of dump environment (Windows)” of PRIMEQUEST 2000 Series Administration Manual (CA92344-0537).

5.4.1 About memory dump file/paging file

Memory dump file stores the debug information when STOP error (Fatal system error) occurs in the system. Settings for obtaining the memory dump are done after installing the operating system to be used in the operation or after installing the application.
The paging file is created in the hard disk to temporarily secure the memory area which has not been used. Paging file is also used at the time of creating the memory dump file. At the time of creating the memory dump file, entire memory dump information is stored temporarily in the paging file.
For the details regarding the memory dump file and paging file, see “11.4.3.Setup of dump environment (Windows)” of PRIMEQUEST 2000 Series Administration Manual (CA92344-0537).

5.5 Setup of dump environment (Linux)

In RHEL, the environment which can acquire the dump most reliably can be prepared by combining the kdump function which is a standard function of the operating system and the sadump function of hardware.

5.5.1 How to use sadump (Linux)

This section explains steps for sadump. Sadump allows you to store memory dump under the situation like below while kdump, the standard Red Hat Linux function does not allows this.

- OS panic or hang up before Kdump service starts
- Error while Kdump is working

1. Preparation

Install the following two packages corresponded the kernel version in use .

- kernel-debuginfo-common
- kernel-debuginfo

2. Configuring UEFI

Read “5.3 Setting of sadump” to configure UEFI for sadump. **Note** the following points.

- Set “RECYCLE” in Set up Manager to “<Enable>”. If it is not “<Enable>”, configuring dump devices is needed every time after taking a memory dump by sadump.
- Select “Create a dump device” in Dump device Manager, and set “Create mode” to “<Single>”.” <Multiple>” is not supported.

3. Configuring OS

Kdump need to be set up beforehand to use sadump. After configuring Kdump, the additional configuration is needed as follows.

- Configuration not to reboot after panic

Set kernel parameter “kernel.panic” to 0 (default is 0). If not set, system reboot automatically after panic and the chance to start sadump is missed. Configure /etc/sysctl.conf as follows.

```
kernel.panic=0
```

- Configuration to stop system after Kdump

In /etc/kdump.conf, set “default” to “halt” or “shell”. If not set, system reboot automatically when Kdump fails and the chance to start sadump is missed.

- Configuration to start sadump

Set “blacklist kvm-intel” in /etc/kdump.conf. If not set, SMI is blocked and sadump cannot start.

Example of /etc/kdump.conf

```
ext4 LABEL=/dump
path /
core_collector cp --sparse=always
extra_bins /bin/cp
disk_timeout 60
default shell
blacklist kvm-intel
```

- Configuration to start Kdump by NMI

As a procedure to start sadump, starting Kdump by NMI is needed at first. Configure /etc/sysctl.conf as follows.

```
kernel.unknown_nmi_panic=1
```

4. Start sadump and confirmation

Start sadump as follows.

1) Send NMI to start Kdump

In MMB WebUI, Select [Partition], and select [NMI] in [Power Control], and click [Apply]

2) If Kdump does not start, then start sadump

In MMB WebUI, Select [Partition], and select [sadump] in [Power Control], and click [Apply]

When memory dumping by sadump starts, the following message is displayed in console screen, and the number is counted up gradually.

```
[ 0.0%].
```

The number becomes 100 and the following message is displayed when memory dump is finished.

```
Dumping Complete
```

After memory dump is finished and OS is rebooted, confirm memory dump by using crash command.
This is an example to check memory dump which is saved on /dev/sdb1. The “DATE” means the date and time when memory dump was captured.

```
# crash /usr/lib/debug/lib/modules/2.6.32-358.el6.x86_64/vmlinux /dev/sdb1
(snip)
      KERNEL: /usr/lib/debug/lib/modules/2.6.32-358.el6.x86_64/vmlinux
    DUMPFILE: /dev/sdb1
        CPUS: 2
        DATE: Fri Oct 11 09:10:39 2013
      UPTIME: 00:19:04
LOAD AVERAGE: 0.14, 0.03, 0.01
       TASKS: 125
    NODENAME: localhost
     RELEASE: 2.6.32-358.el6.x86_64
     VERSION: #1 SMP Tue Jan 29 11:47:41 EST 2013
     MACHINE: x86_64  (1861 Mhz)
      MEMORY: 4 GB
       PANIC: "Oops: 0002 [#1] SMP " (check log for details)
         PID: 7866
     COMMAND: "bash"
        TASK: ffff8801387c8aa0  [THREAD_INFO: ffff8801394e2000]
         CPU: 0
       STATE: TASK_RUNNING (PANIC)
```

5. Send memory dump to vendor

Send memory dump to vendor who supports RHEL. makedumpfile command can be used to convert memory dump to a normal file. makedumpfile can generate small dump file by compression or filtering. Read man manual of makedumpfile for details. This is an example of saving memory dump on /dev/sdb1 to a vmcore file using compression and filtering out memory region except kernel memory(Write following command in one line).

```
# makedumpfile –c –d 31 –x
/usr/lib/debug/lib/modules/2.6.32-358.el6.x86_64/vmlinux /dev/sdb1 vmcore
```

5.6 Setup of NTP client

See “6.2 Setup of NTP”, for the setup of the NTP client.

5.7 Saving management and configuration information

This explains about how to save the following information. Be sure to save the UEFI configuration information.
- 5.7.1 Saving MMB configuration information
- 5.7.2 Saving BIOS configuration information

Remark
Save the UEFI configuration information regularly after starting the operation. For saving EFI configuration information, see “5.7.2 Saving BIOS configuration information”

All the screenshots are display examples. The contents displayed may differ depending on the system configuration.

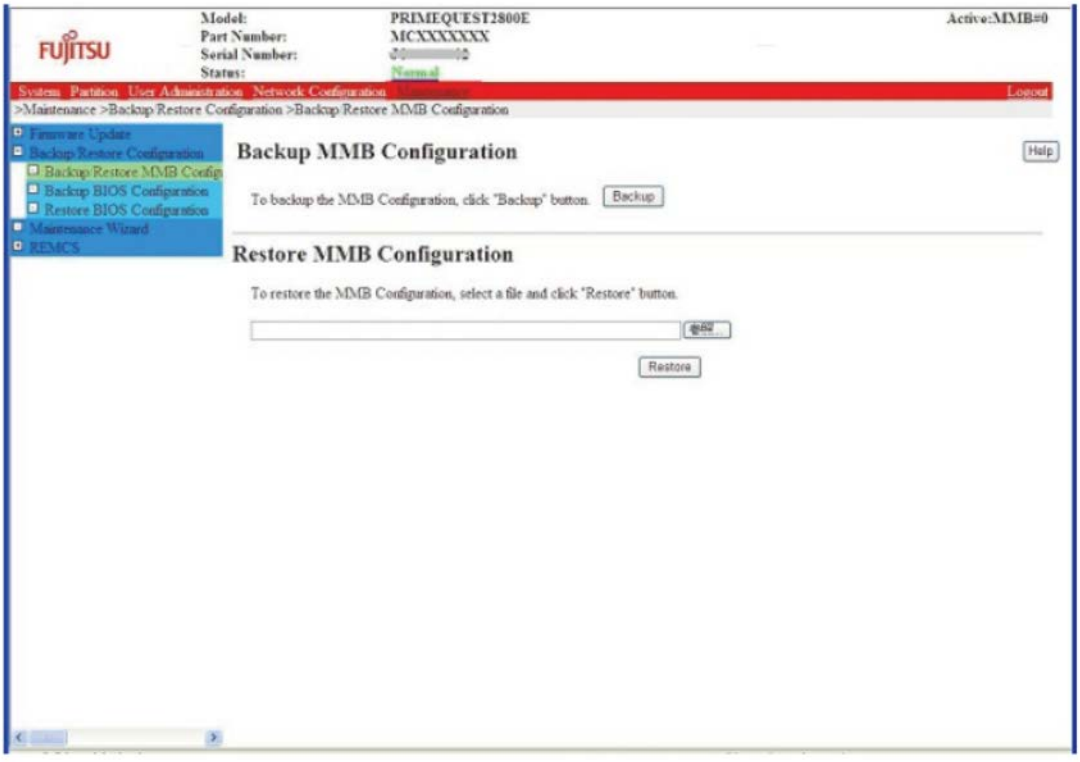
5.7.1 Storage of MMB configuration information

This explains the method to take back-up of the MMB configuration information on remote PC.
[Maintenance] menu in MMB Web-UI is used, for storing the MMB configuration information.

Operations

1. Select the [Maintenance]-[Backup/Restore Configuration]-[Backup/Restore MMB Configuration]
   → [Backup/Restore MMB Configuration] window is displayed.

FIGURE 5.17 Example of [Backup/Restore MMB Configuration] Window



2. Click [Backup] button
   → Storage location dialogue box of browser is displayed.
3. Select the storage pass and click the [OK] button
   → Downloading of configuration information file is started.
   Initial file of the MMB configuration information for back-up is as follows.
   MMB_ (Date on which the backup of the file taken)(MMB version).dat

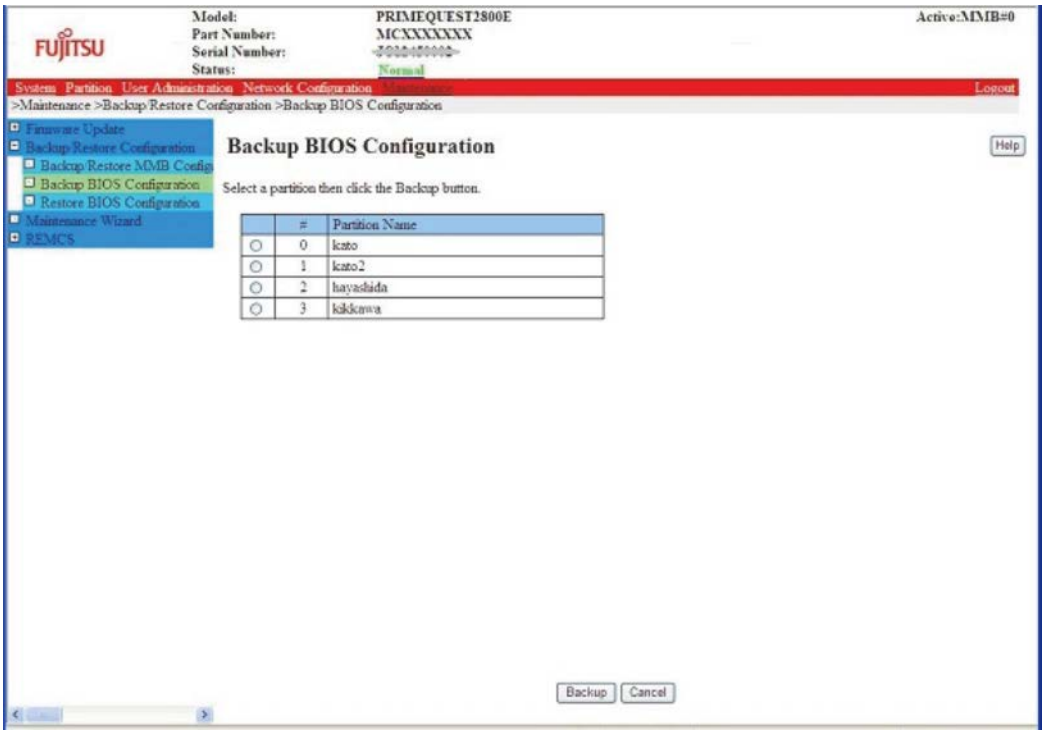
5.7.2 Storage of BIOS configuration information

This section describes the method for taking the backup of the BIOS configuration information on a remote PC.
[Maintenance] menu in MMB Web-UI is used for storing the BIOS configuration information.

Operations

1. Select the [Maintenance]-[Backup/Restore Configuration]-[Backup BIOS Configuration]
   → [Backup BIOS Configuration] window is displayed.

FIGURE 5.18 Example of [Backup BIOS Configuration]



2. Select the radio button of partition which takes the backup of configuration information, and click [Backup] button.
   → Dialogue box which specifies the storage location, is displayed.
3. Select the storage pass and click [OK] button.
   Initial file name of the BIOS configuration for back-up is as follows.
   Partition number_ Date on which the backup of the file is taken_(BIOS version).dat

5.8 “Write Policy” recommended setting of SAS array controller card

You can attach a flash backup unit to SAS array controller card (including dual channel).

The recommended setting of Write Policy is as follows. It is different whether SAS array controller card has a flash backup unit or not.
Please refer to "LSI MegaRAID®SAS Software" for the detailed function and the setting method.

Flash backup unit	Write Policy recommended setting
Without flash backup unit	Write Through
With flash backup unit	Write Back

CHAPTER 6 Work after installation

This chapter explains the operation which is to be implemented after introducing the PRIMEQUEST 2000 series, such as setting of NTP or setting of security.

6.1 Redundant configuration of network adaptor

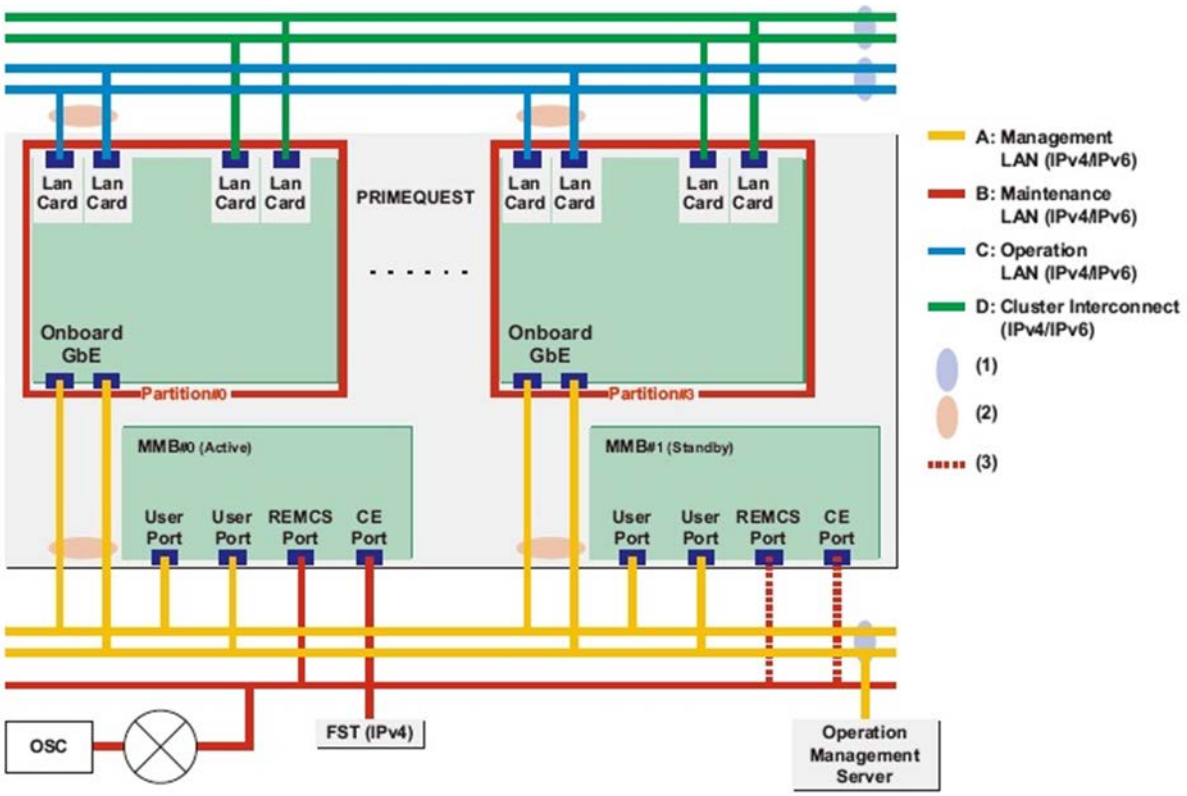
For establishing the network after installation, following teaming (multi-pass) is set by using the utility corresponding to each network adaptor.

Setup of network adaptor (Intel Gigabit Ethernet (GbE))

For management LAN and operation LAN, redundant setting of network is done. Network to be targeted is (2) in the following Figure.

- Windows: Configure the teaming by using the Intel PROSet (R) (*1). For details, see help of IntelPROSet (R).
  *1: In Windows Server 2012 or later, NIC teaming of standard function of the operating system, can also be used.

FIGURE 6.1 External network configuration



Number	Description
(1)	Switching Hub redundancy
(2)	redundancy by teaming(such as GLS)
(3)	Standby side is disabled

Note

There are some notes on teaming with IntelPROSet (R).
For the details on the notes, see “G.9 NIC (Network Interface Code)” of PRIIMEQUEST 2000 Series Administration Manual (CA92344-0537)

6.2 NTP Configuration

This section describes the operation method in the PRIMEQUEST 2000 series, regarding the operation of time correction wherein Network Time Protocol (NTP) is used.
NTP is the protocol which provides the method by which time information is exchanged between the computers of same type. The time correction function references the correct time on another system at system startup. Then, it sets the time and keeps it within the specified error range.
At that time, system with original time is called as NTP server and the reference system is called as NTP client. In the NTP server, it is necessary to activate the NTP service, for responding to the request from the NTP client.

In case of the operation of time correction which is used in NTP, when the operating system is Windows, see “Appendix E Specifications and setting of NTP server (Windows)”

For usage conditions and notes of Extended Partitioning function, see “3.2.1 Extended Partitioning” of PRIMEQUEST 2000 Series Administration Manual (CA92344-0537).
All the windows given here are the display examples. Contents displayed according to system configuration are different.

6.2.1 Method of operating NTP in PRIMEQUEST 2000 series

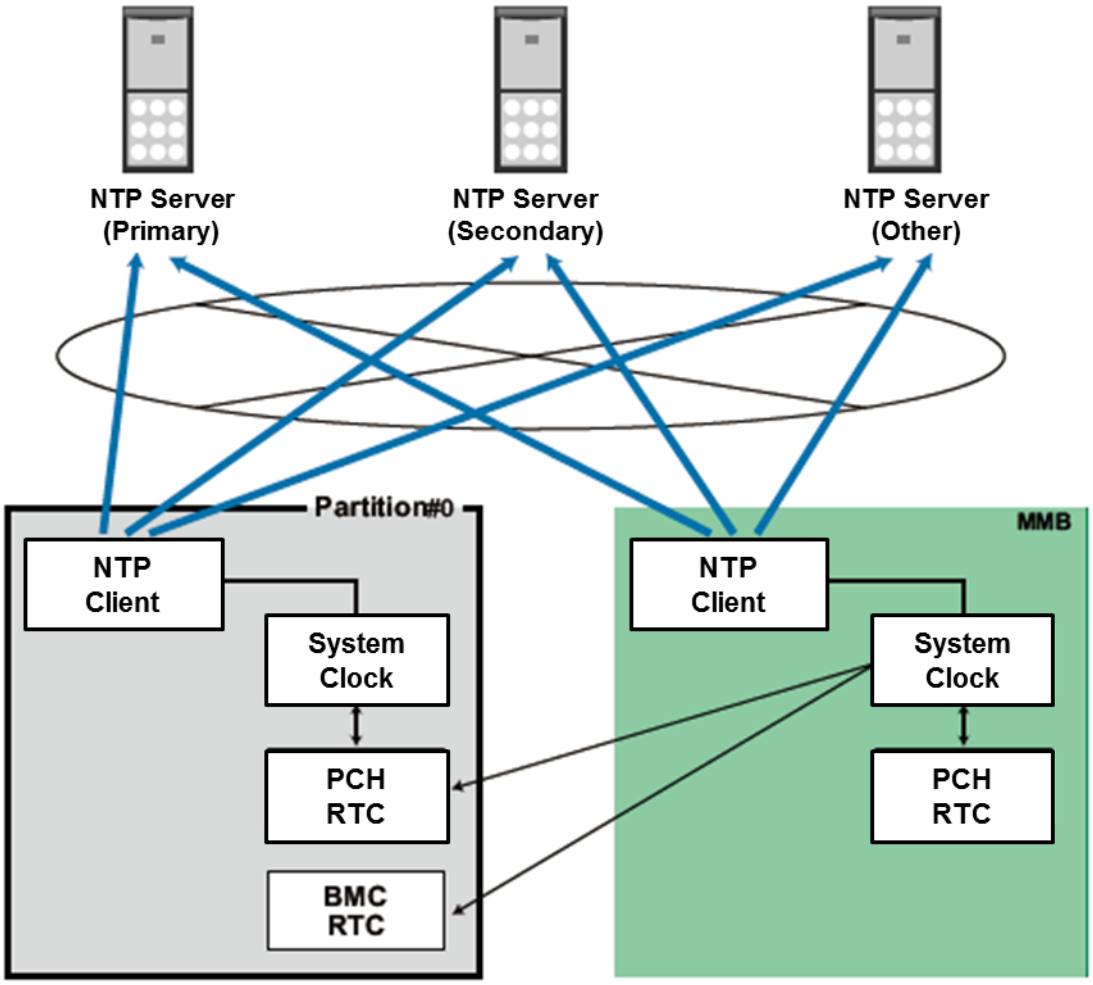
This explains the method of time correction of each partition where NTP in the PRIMEQUEST 2000 series is used.
In the PRIMEQUEST 2000 series, there are two types of objects which set the time.

- MMB
- Each partition

For the details regarding the NTP client of MMB, see “6.2.2. Specification of NTP server”
Time of each partition is corrected by setting the NTP client of the operating system which is installed.
For the stable NTP operation, specify multiple (In case of RHEL, three servers or more) NTP servers from each NTP client.
Schematic diagram of operation when NTP server other than MMB is used is shown in “Figure 7.2 Operation diagram when external NTP server is used (Case when 3 NTP servers are used).

Note
Match the stratum (Stratum) while using multiple NTP servers.

FIGURE 6.2 Operation Diagram when External NTP Server is used (When three NTP servers are used)



Only one NTP server can be specified. In that case, when it is not possible to communicate with the NTP server which is specified by the NTP client, since other synchronous object does not exist, NTP server is disabled. NTP client cannot do the time correction according to NTP within the period in which communication with the NTP server is restored. As a result, time is recorded with the system clock accuracy. Since there is an individual difference in the accuracy of the system clock, when time correction according to NTP is not possible, time gap between the systems is enlarged, and problems might be caused in the middleware or in the application.

Remark
NTP server 1~NTP server 3 are the NTP servers having high accuracy of time in internet or in intranet.

6.2.2 Setting NTP server

Other NTP server which is time synchronous is specified by using the NTP client function of the MMB.

Note
Time of MMB and time of partition side is controlled by the respective independent clocks. Clock of MMB does not repot and adjust the partition clock. Since the time of MMB and time of partition, are necessary for following responses, keep the MMB time and the partition time the same or at least close.

- At the time of comparing the MMB side log and the operating system side log in partition by the hard failure
- At the time of executing the system inspection or executing the security inspection

- When alarm occurs in the time maintenance battery of the partition side.

Execute any of the following ways to adjust the time.

- Set the time manually from the MMB Web-UI
- Set the time by using the NTP client function of the MMB

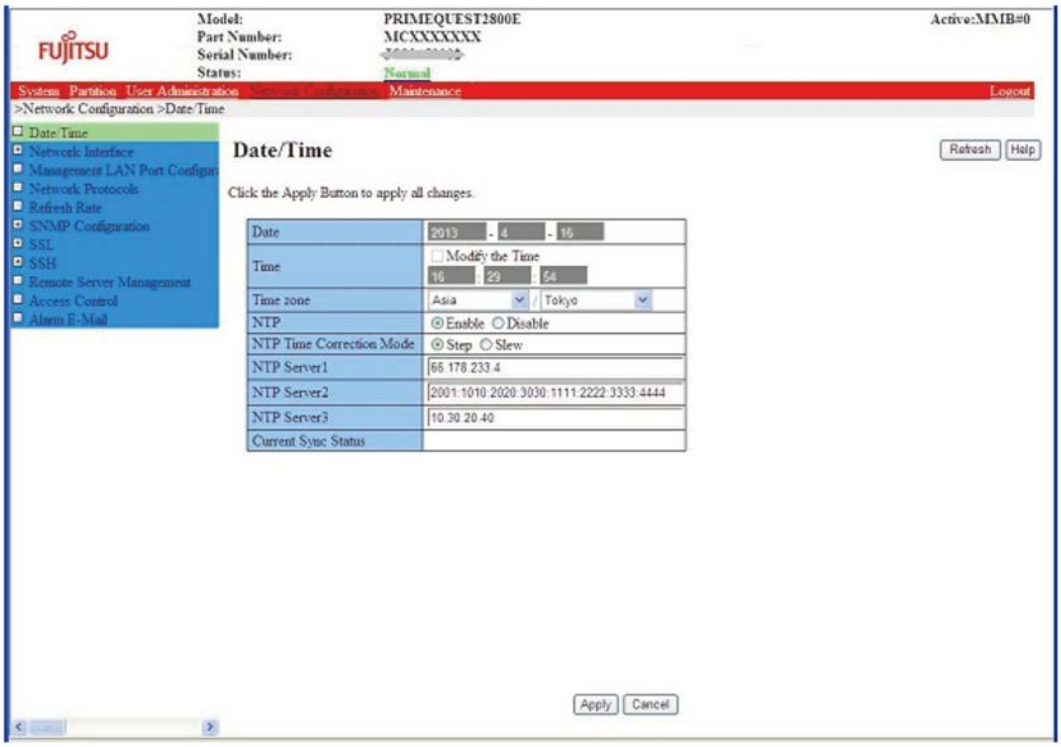
Remark

Set the time on Operation System if NTP is not used.

Operations

1. Click [Networking configuration] – [Date/Time].
   → [Date/Time] window is displayed. For the details of [Date/Time] window, see "1.5.1 [Date/Time] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 6.3 Example of [Date/Time] Window



2. Click [Enable] for [NTP].
3. Select [NTP Time Correction Mode].
4. Enter IP address of other NTP server.
   NTP Server 1: Specify NTP server.
   NTP Server 2: Specify NTP server is.
   NTP Server 3: Specify Other (Tertiary) NTP server is.
5. Click [Apply] button.
   MMB synchronizes with NTP server and time set in NTP Server 1 ~ NTP Server 3.
6. After few minutes click [Refresh] button and confirm whether the correct time is displayed.

6.3 Configuring DNS server

See "3.3.8 DNS Server Configuration", for configuration of DNS server.

6.4 Set up of SMTP

See "3.3.9 Set up of Alarm E-Mail" for configuration of SMTP.

6.5 Set up of security

This section describes how to make the necessary settings to ensure security and notification of errors during operation.
Configure the security necessary for operation.
It is recommended to take the back-up of the set-up information when below mentioned set ups are completed. See "3.5 Save structural information" for the back-up of the set information.

- 6.5.1 Set up of a access control
- 6.5.2 Set up of SNMP
- 6.5.3 Set up of SSH
- 6.5.4 Set up of HTTPS

All the screenshots are display examples and the contents to be displayed differ depending upon the system configuration.

6.5.1 Set up of Access Control

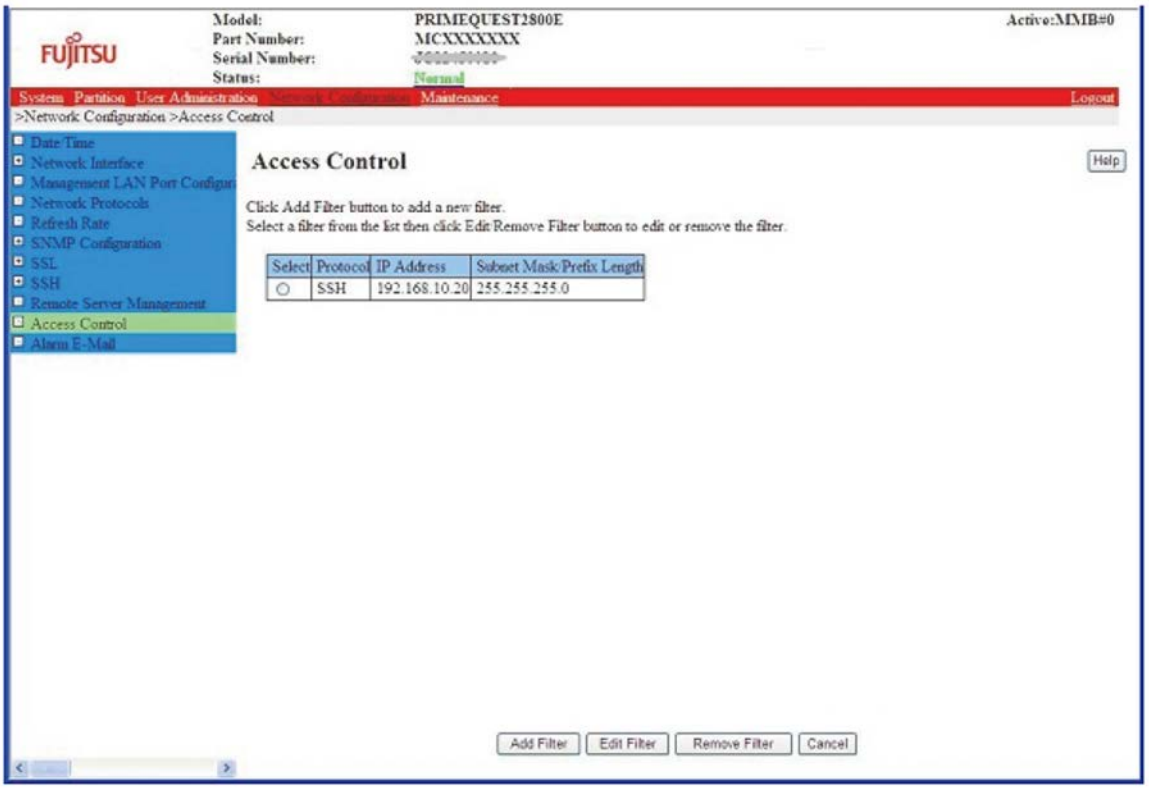
To secure the security of MMB, set up access control according to Network Protocol.
For securing the security, it is recommended to set up access control at the time of installation. Access control can also be set up after the installation.

Selection of Filters of Editing objects

Operations

1. Click [Network Configuration] - [Access Control].
   → [Access Control] window is displayed. See "1.5.10 [Access Control] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539) for the details of [Access Control] window.

FIGURE 6.4 Example of [Access Control] Window



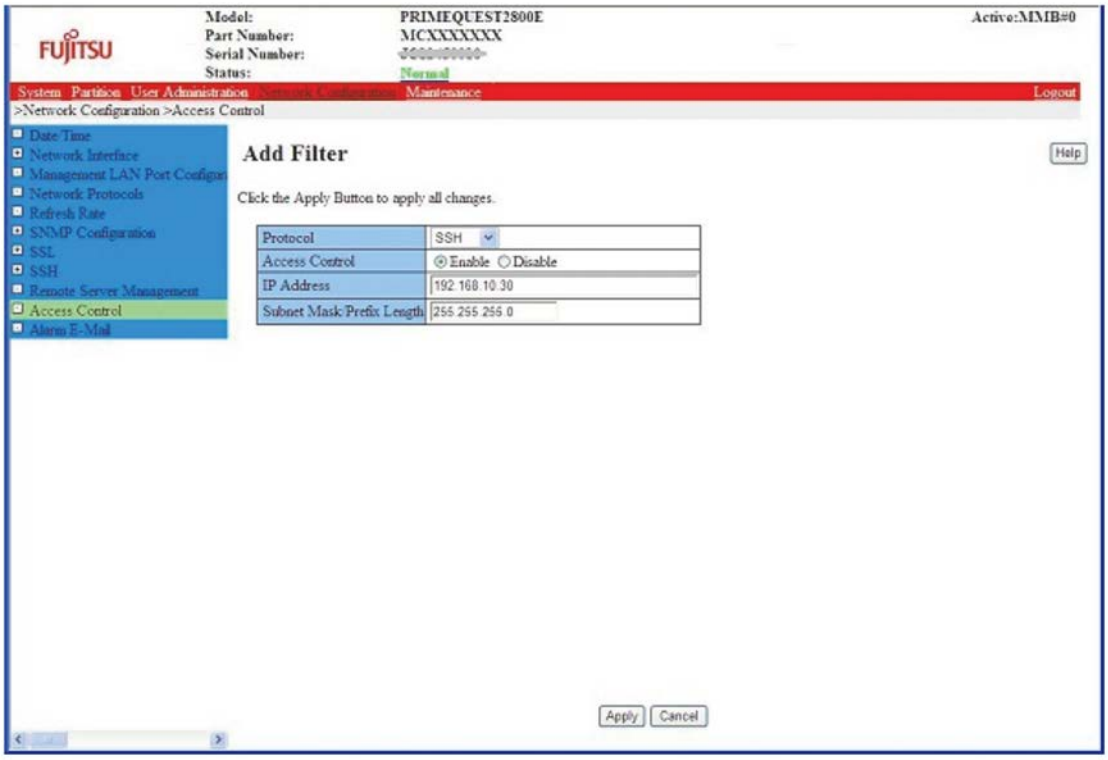
2. Filter of editing object is selected by radio button.

Addition and editing of filters

Operations

1. Click [Add Filter] button when filter is to be added and click [Edit Filter] button after selecting the filter when filter is to be edited.
   → At the time of addition [Add Filter] window and at the time of editing [Edit Filter] is displayed. See PRIMEQUEST 2000 series Tool Reference (CA92344-0539) "[■ Add filter/Edit filter] Window of 1.5.10 [Access Control] window" for the details of [Add Filter] window and [Edit Filter] window.

FIGURE 6.5 Example of [Add Filter] Window



2. Enter required items.
   Maximum 64 filters can be set.

   Remark
   When there are proxy settings in Web browser of PC and work station, set IP address considering the proxy set up.

3. Click [Apply] button.

Deletion of Filter

Operations

1. After selecting the filter, click [Remove Filter] button.
   →Window of confirmation of deletion is displayed.
2. At the time of deletion, click [OK] button.
   →Returns to [Access Control] window. The deletion of filter is confirmed on the list. If the deletion is to be cancelled, click [Cancel] button.

6.5.2 Set up of SNMP

Simple Network Management Protocol (SNMP) is set up. Configure SNMP with the permission of Administrator.
Set whether to report any operational failure to an external destination, the notification destination.

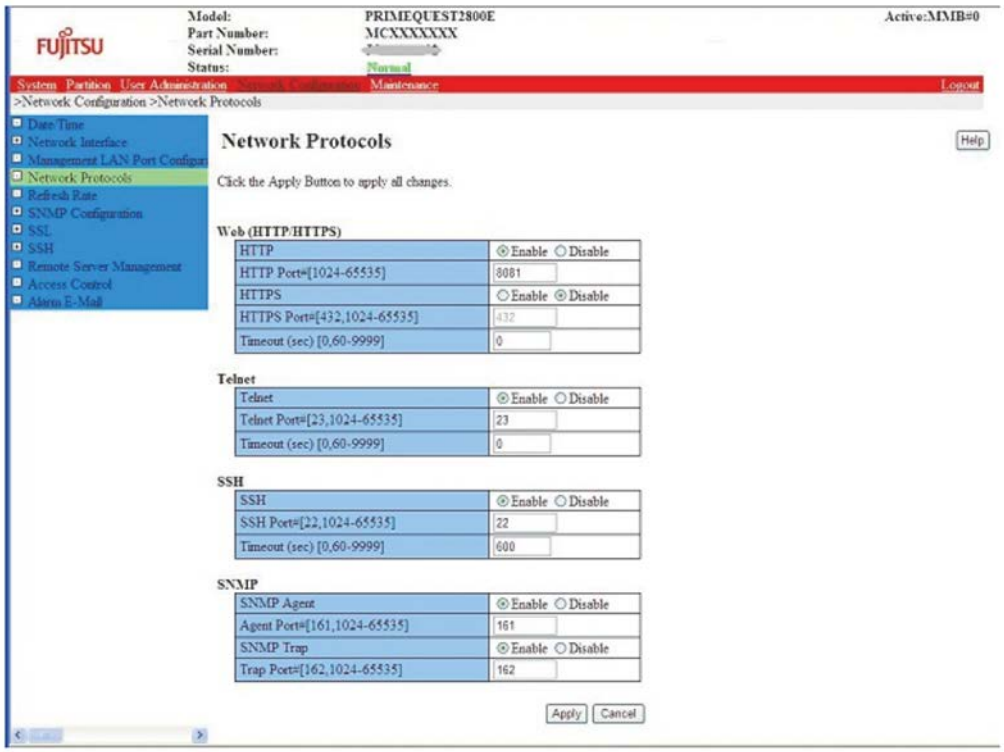
- Enable SNMP
- Set the details of SNMP
- Set up transmission destination of SNMP trap
- Set up SNMP v3

Validate SNMP

Operations

1. Click [Network Configuration] - [Network Protocols].
   → [Network Protocols] window is displayed. See "1.5.4 [Network Protocols] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539) for the details of [Network Protocols] window.

FIGURE 6.6 Example of [Network Protocols] Window



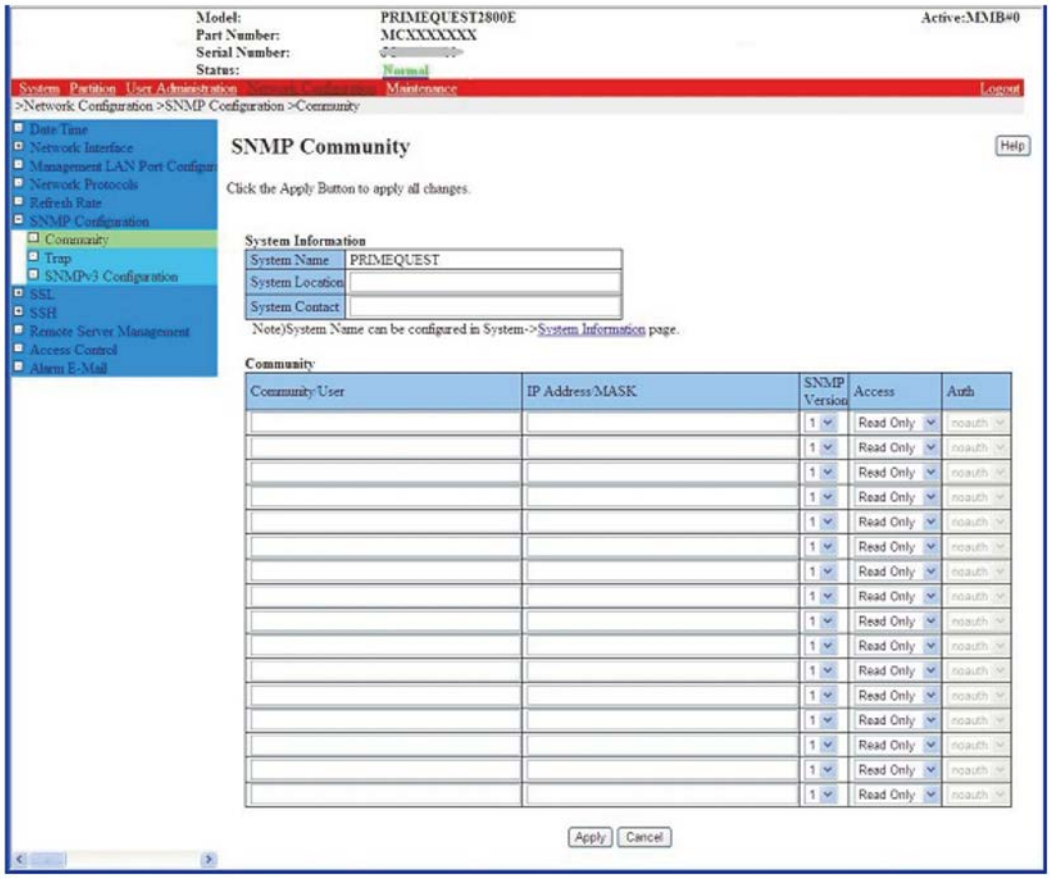
2. Enter SNMP items.
3. Click [Apply] button.

Set up of SNMP details

Operations

1. Click [Network Configuration] - [SNMP Configuration] - [Community].
   → [SNMP Community] window is displayed. For the details on [SNMP Community] window, see "["■ [SNMP Community] window" of 1.5.6 [SNMP Configuration] Menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 6.7 Example of [SNMP Community] Window



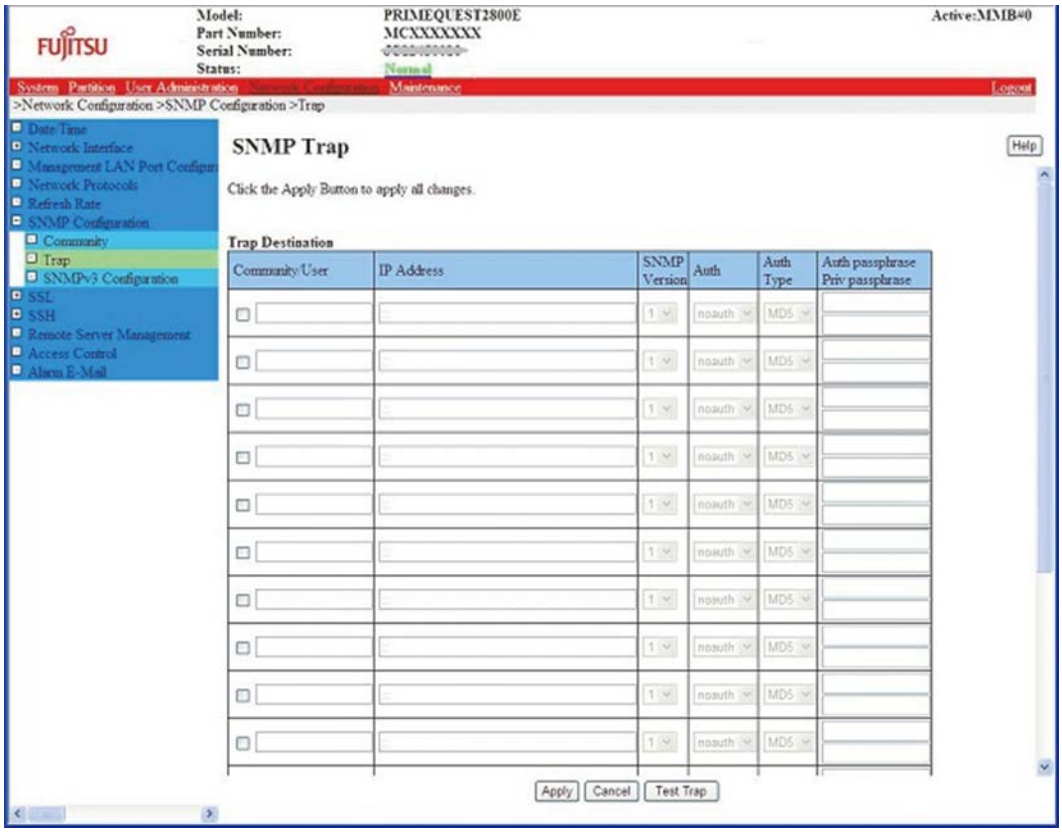
2. Enter the required items.
   Maximum 16 Communities can be set. The details regarding the community to be set, IP Address where Access is permitted, SNMP version, Access authority and authentication are entered.
   At the time of deletion, click the items of [Community] and [IP Address].
3. Click [Apply] button.

Set up transmission destination of SNMP trap

Operations

1. Click [Network Configuration] - [SNMP Configuration] - [Trap].
   → [SNMP Trap] window is displayed. See "["■ [SNMP Trap window] window" of 1.5.6 [SNMP Configuration] Menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539) for the details of [SNMP Trap] window.

FIGURE 6.8 Example of [SNMP Trap] Window



2. Enter the transmission destination.
   A maximum 16 Trap destinations can be set up.
   The details regarding community or user name, IP address of trap transmission destination, SNMP version, and authentication level are set up.
3. Click [Apply] button.
   When [Test Trap] button is clicked, trap for test for currently set up trap destination can be transmitted.

Set up SNMP v3

Specific engine ID and specific user is set in SNMP v3.

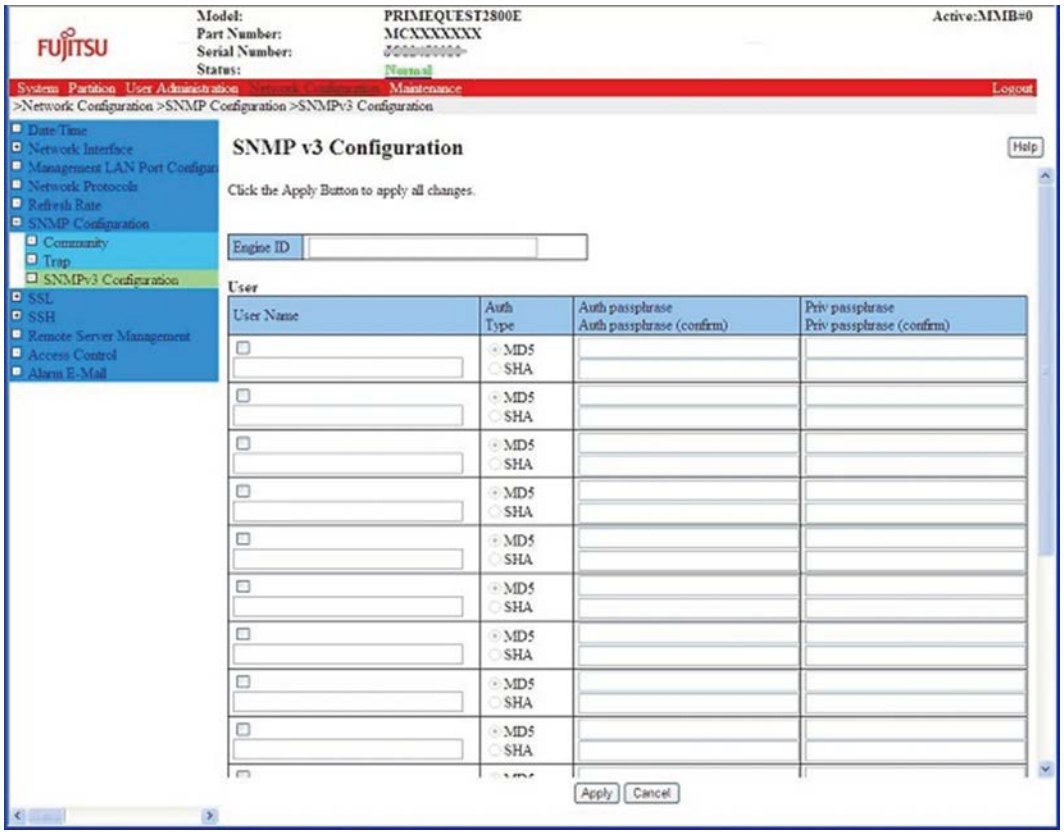
Remark

When an engine ID or IP address is changed, all the users set for SNMP v3 access should be set again. To enable the set users, it is necessary to reboot SNMP service once it is stopped. When [Apply] button is clicked for that, SNMP service gets temporarily stopped.

Operations

1. Click [Network Configuration] - [SNMP Configuration] - [SNMP v3 Configuration].
   → [SNMP v3 Configuration] window is displayed. See "["■ [SNMP v3 Configuration] window" of 1.5.6 [SNMP Configuration] Menu" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539) for the details of [SNMP v3 Configuration] window.

FIGURE 6.9 Example of [SNMP v3 Configuration]



2. Enter SNMP v3 user.
   A maximum of 16 users can be registered.
3. Click [Apply] button.
   SNMP service is restarted for reflecting the selected user.

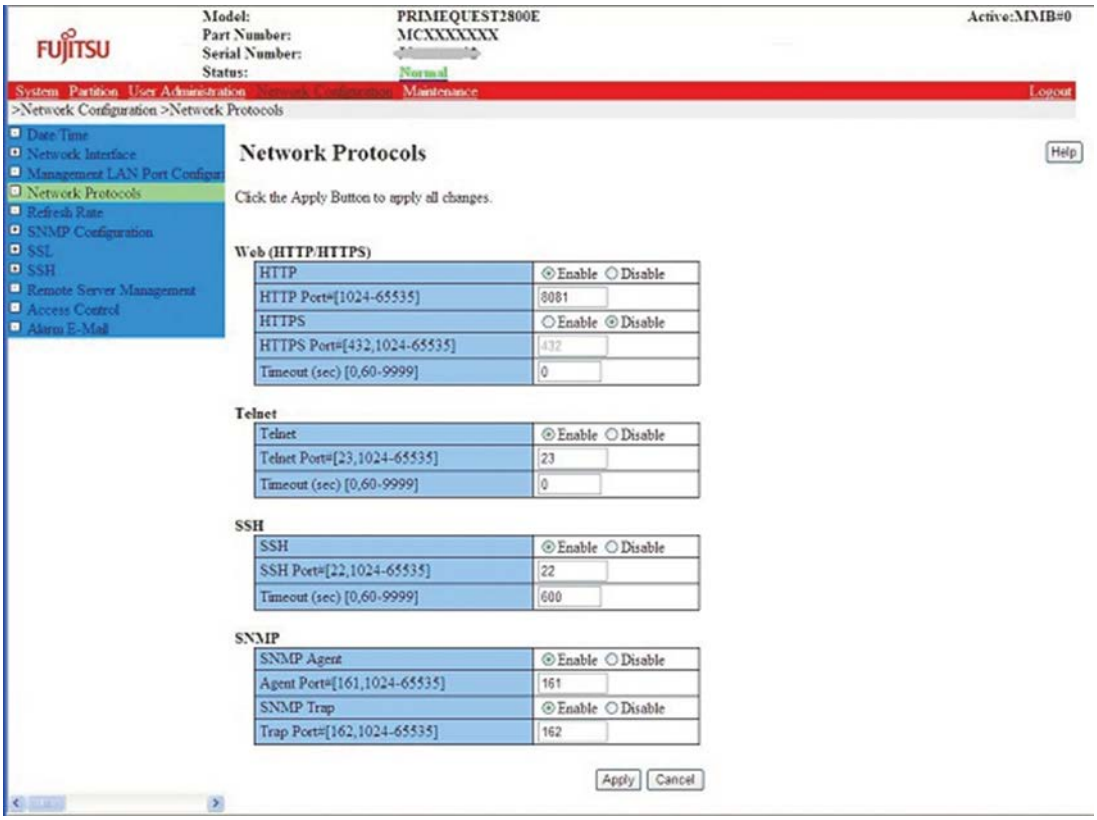
6.5.3 Set up of SSH

Configure SSH for the MMB. You can set it with Administrator privileges.

Operations

1. Click [Network Configuration] - [Network Protocols].
   [Network Protocols] window is displayed. For the details of [Network Protocols] window, see “[1.5.4 [Network Protocols Window] window of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 6.10 Example of [Network Protocols] Window



2. Set the [SSH] items.
3. Click the [Apply] button.

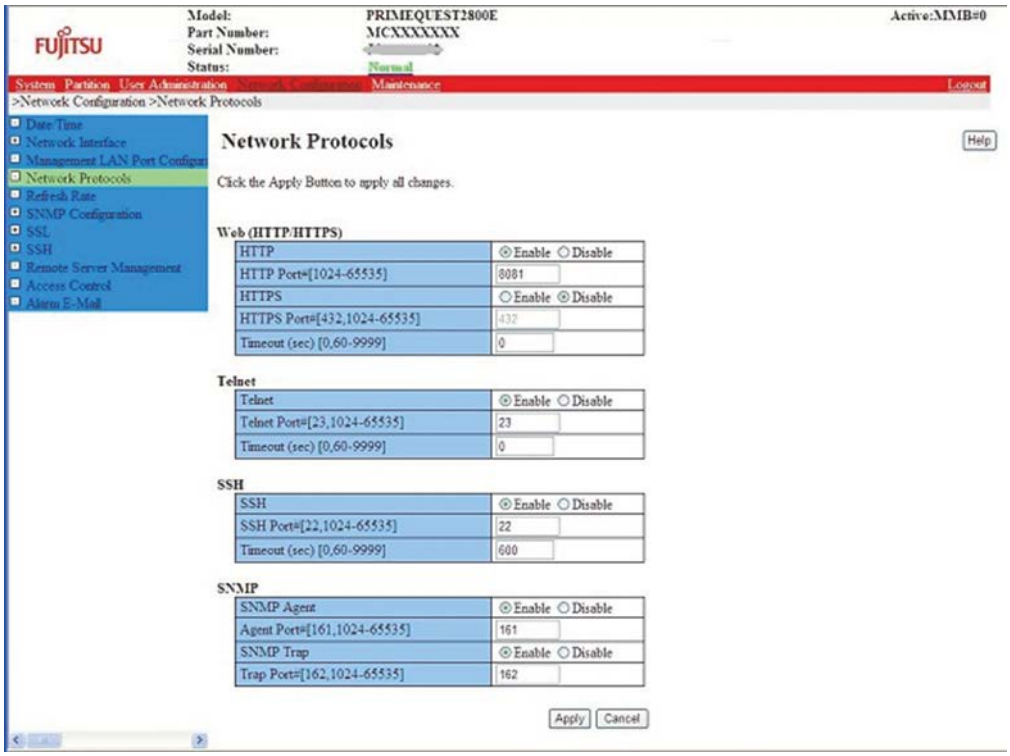
6.5.4 HTTPS Settings

The HTTPS of MMB is set. It can be set by using Administrator privileges.
To [Enable] the HTTPS, it is necessary to register a valid SSL certificate. When the valid SSL certificate is not registered and when it is attempted to [Enable] the HTTPS, error is displayed.
For the valid SSL certificate, specify the “attested certificate” or “self-attested certificate” that is generated on MMB window.
There are cases where HTTPS is already set by our engineers. If the changes are not required, skip the HTTPS settings and proceed to the next settings.

Operations

1. Click [Network Configuration] – [Network Protocols].
   →[Network Protocols] window is displayed. For details about the [Network Protocols] window, see “1.5.4 [Network Protocols] window” of the PRIMEQUEST 2000 Series Tool Reference (CA92344-0539).

FIGURE 6.11 Example of [Network Protocols] window



2. Set the items related to HTTPS of [HTTP].
3. Click the [Apply] button.

6.6 Schedule operations

For details about the schedule operations, see “9.3 Schedule operations” of the PRIMEQUEST 2000 Series Administration Manual (CA92344-0537).

CHAPTER 7 Power ON and OFF of the partition

7.1 Related to the power ON and OFF of the partition

The power ON and OFF of the partition is described.
- 7.1.1 Power ON of the partition
- 7.1.2 Power OFF of the partition

Further, the power ON and OFF of the partition can be operated by a Partition Operator account with Administrator or Operator privileges for the partition.
All the screenshots are display examples and the contents displayed by the system configuration are different.

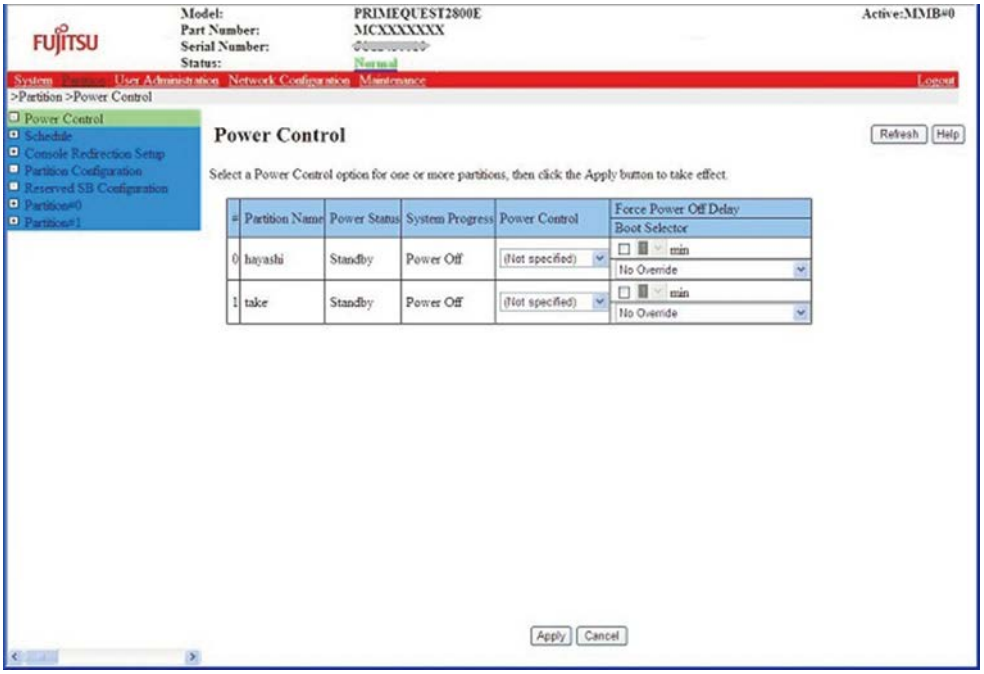
7.1.1 Power ON of the partition

The procedure of power ON of the partition is explained.

Operations

1. Log-in to MMB Web-UI.
   [MMB Web-UI] window is displayed.
2. Click [Partition] – [Power Control].
   [Power Control] window is displayed. For details about the [Power Control] window, see “1.3.1 [Power Control] window” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 7.1 Example of [Power Control] window



3. Select [Power On] for the [Power Control] of the partition number to which power is to be supplied and click the [Apply] button.
4. The dialog box for confirmation is displayed. Click [OK] button to continue the operation and [Cancel] button to cancel the operation.

Remark

- The warning is displayed when 'power is already supplied to the partition' and when 'the control specified for power cut off was failed'.
- After cutting the power of all the partitions, it cannot be supplied for some time.

7.1.2 Power OFF of the partition

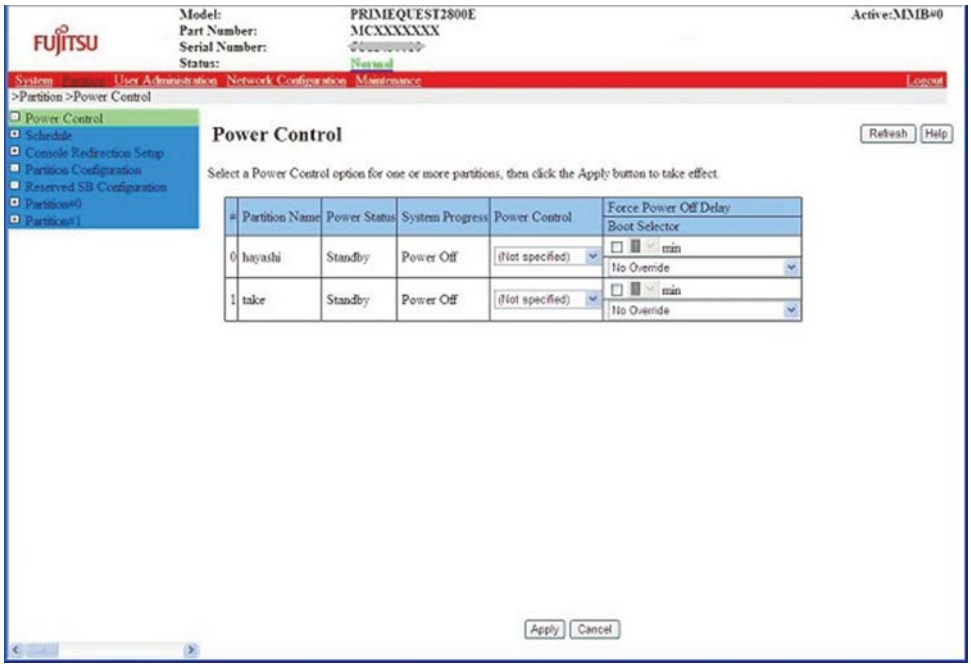
The procedure of power OFF of the partition is explained.
In Windows, when the system is to be shut down from MMB Web-UI, SV Agent (ServerView Agent) is necessary.
For the method of setting the SV Agent, see the description of "System shut down" tab of the ServerView Operations Manager Installation ServerView Agents for Windows.
In case of the below-mentioned status, see "11.2.10 Troubles while partition operations" of PRIMEQUEST 2000 Series Administration Manual (CA92344-0537) and confirm the contents.

- The MMB Web-UI displays [Error] for [Status] (information area) because either of the following was executed:
  - [Power Off], [Reset] or [Force Power Off] of the partition
  - Shutdown from the operating system
- "Read Error" is displayed for Part Number, Serial Number if the status of each component is displayed on the [MMB Web-UI] window.

Operations

1. Log in to MMB Web-UI.
   The [MMB Web-UI] window is displayed.
2. Click [Partition] – [Power Control] from the MMB menu.
   [Power Control] window is displayed. [#] column is partition number. For details on [Power Control] window, see [1.3.1 [Power Control] window" of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

FIGURE 7.2 Example of [Power Control] window



3. Select [Power Off] for the [Power Control] for the partition number of which power is to be cut off and click the [Apply] button.
   The power supply of the specified partition is cut off.

   Remark
   If the operating system supports ACPI and [Power Off] is selected, then the power is automatically cut off on shutting down the operating system. However, even if the operating system supports ACPI, you may be unable to power off the partition as long as an application that does not support it is running on the operating system. It depends on the specifications of the operating system and the application. For details, see the manual of the operating system or the application.
   If the operating system is not compatible to ACPI, according to the power cut off operations, the power is cut off without shutting down the operating system.
   Therefore, due to the above-mentioned reasons, shut down the partition in the operating system

Appendix A List of setting items

See “Appendix A list of setting items” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

A.1 Setting items of MMB

See “A.1.Setting items of MMB Web-UI” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

A.2 Setting items of UEFI

See “A.2.Setting items of UEFI” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

A.3 Setting items of BMC

See “A.3.Setting items of video redirection” of PRIMEQUEST 2000 series Tool Reference (CA92344-0539).

Appendix B About software

For details about the software bundled with the hardware of the PRIMEQUEST 2000 series, see “3.3 Bundled software” of PRIMEQUEST 2000 series Product Description (CA92344-0534).

Appendix C Configuring the SAN boot environment

For details on developing the SAN boot environment, see PRIMEQUEST 2000 Series SAN Boot Environment Configuration Manual (C122-E206EN).

Appendix D Notes on VMware installation

This appendix describes how to install VMware vSphere using the RAID environment configured in internal HDD/SSD. It also provides notes on installation.
Hereafter, VMware vSphere is mentioned as VMware 5.x or VMware.

D.1 Building the RAID environment in the VMware 5.x internal disk.

In the PRIMEQUEST 2000 series, RAID 0, RAID1, RAID 1E, RAID 5, RAID 6, RAID 10, RAID 50, RAID 60 are supported in internal HDD/SSD.
For details on building a RAID configuration using internal hard disks, see the SAS RAID controller Guide.

D.2 Installing VMware 5.x Bundled Software

The bundled software is stored in ServerView Suite DVD(Tools) . The files are copied from ServerView Suite DVD(Tools) and then used.
Further, the bundled software necessary for VMware vSphere 5 are as mentioned below.

TABLE D.1 Installation of the software attached to VMware 5.x

Bundled software	Installation destination
ServerView ESXi CIM Provider	VMware ESXi

Appendix E Setting up the NTP Server (Windows)

This appendix describes how to specify and set of an NTP server for a specific Windows operating system.
This appendix is not needed for Active Directory member servers.
Active Directory member servers automatically synchronize the system clock with the domain controller.

E.1 Overview of NTP Client Settings

This appendix describes procedures for settings synchronizing the system clock with an NTP server for operating systems consisting of the following:

- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2

Remark

In the PRIMEQUEST 2000 series, the system time of a partition is kept in the Home SB. Therefore, if the Home SB of a partition is replaced during maintenance or switched by the reserved SB function, the system time of the partition may become incorrect.
The system clock synchronizes with an NTP server once a week in the default configuration of the Workgroup environment of Windows. Before Windows Server 2008, the system clock is synchronized at system startup. However, in Windows Server 2008 R2 or later, it is not synchronized.
Use the following procedures to set the system to synchronize with the system clock.

FIGURE E.1 Settings for system clock synchronization

Task name	Task description
Specifying an NTP Server	Specify an NTP server in [Control Panel] - [Date and Time].
Synchronization Interval Setting	Set the following registry value with the Registry Editor to set a synchronization interval of 15 minutes: HKEY_LOCAL_MACHINE¥SYSTEM¥CurrentControlSet¥Services¥W32Time¥TimeProviders¥NtpClient *There is no line feed in the above registry key. name: SpecialPollInterval type: REG_DWORD value: 900 (decimal)
Startup Settings of NTP Service	Set the Windows Time service to start automatically in [Computer Management] - [Services and Applications] - [Services]
Event Task Settings	Register the following in Task Scheduler to synchronize with the System time when the time can be acquired from an NTP

	server: Log: "System", Source: "Time-Service", ID:37 The "w32tm /resync" command will run.

For detailed procedures, see following chapter:

- E.2 NTP Settings in Windows Server 2012 and Windows Server 2012 R2
- E.3 NTP Settings in Windows Server 2008 R2

E.2 NTP Settings in Windows Server 2012 and Windows Server 2012 R2

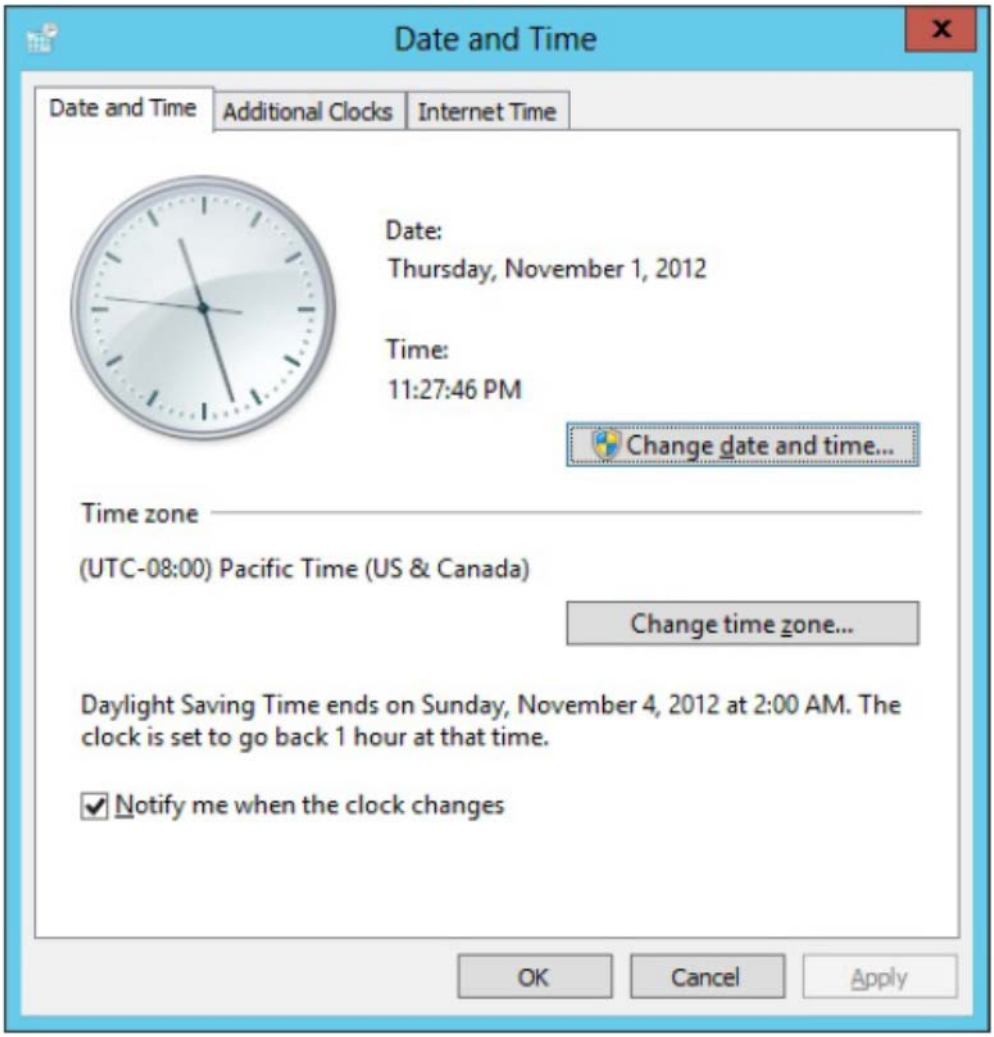
The procedures in this chapter require Administrator privileges.

All screenshots are display examples, and the actually displayed contents vary depending on the system configuration and other factors.

E.2.1 Specifying an NTP Server

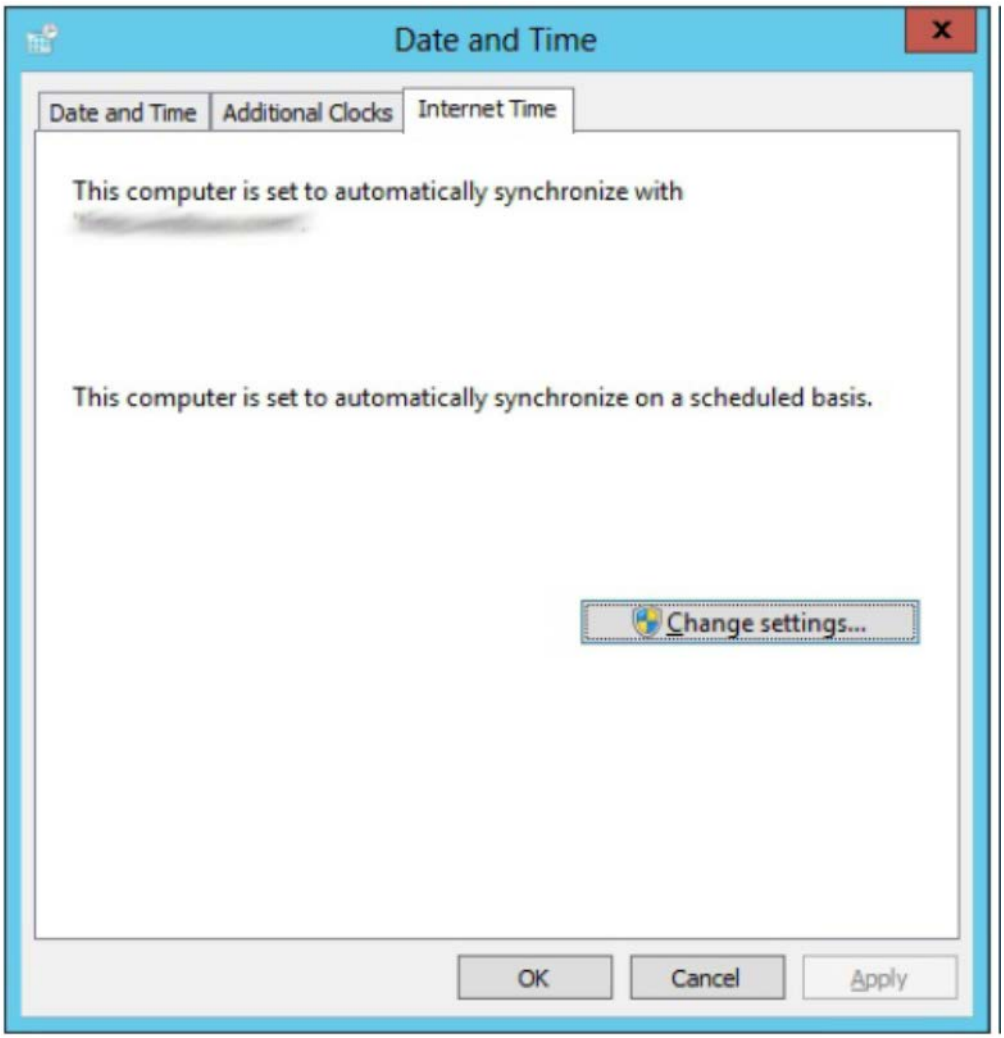
1. Select [Control Panel] - [Set the time and date]. The [Date and Time] dialog box appears.

FIGURE E.2 [Date and Time] window (1)



2. Click the [Change settings] button on the [Internet Time] tab.

FIGURE E.3 [Date and Time] window (2)



3. Set the following parameters in the [Internet Time Settings] dialog box.
   - [Synchronize with an Internet time server]: Check the check box.
   - [Server]: Enter an NTP server name.

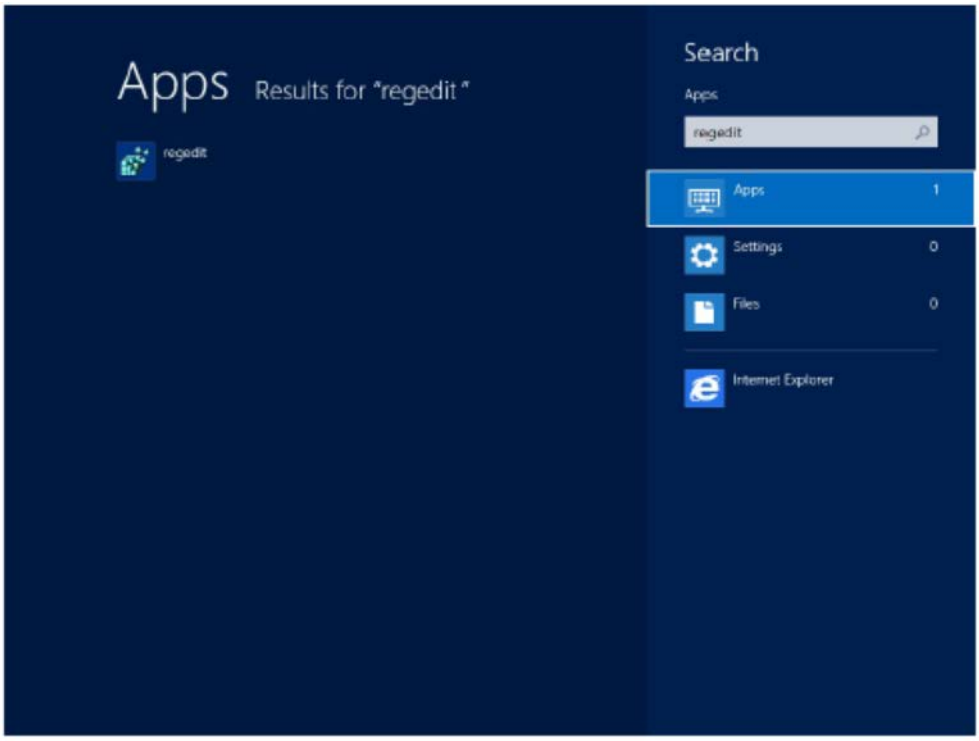
FIGURE E.4 [Internet Time Settings] window

4. Click the [OK] button to close the [Internet Time Settings] dialog box.
5. Click the [OK] button to close the [Date and Time] dialog box.

E.2.2 Synchronization Interval and Startup Settings of NTP Service

1. Enter "regedit" in [Search] to start the Registry Editor.

FIGURE E.5 [Registry Editor] selection window

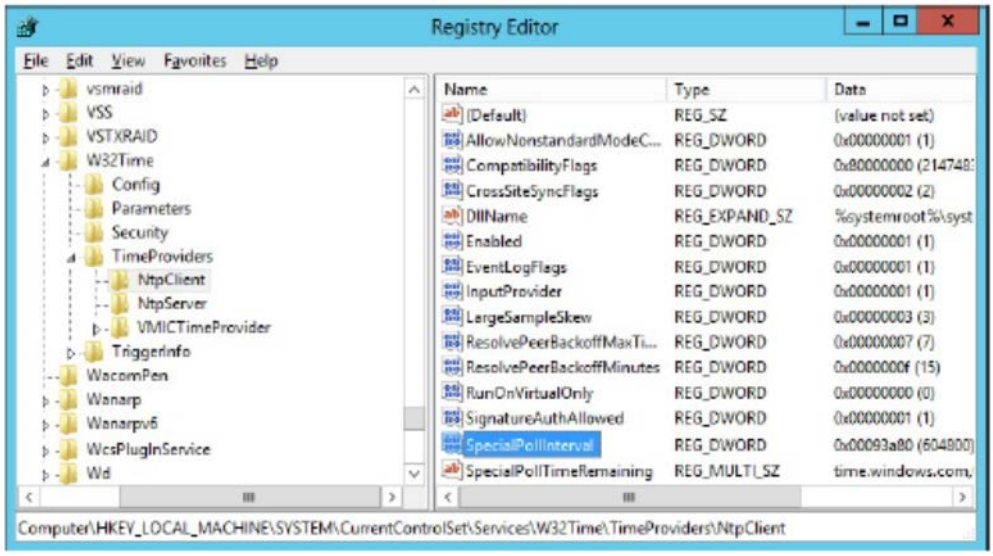


2. Open the following key, and set 900 for the SpecialPollInterval value.

HKEY_LOCAL_MACHINE¥SYSTEM¥CurrentControlSet¥Services¥W32Time¥TimeProviders¥NtpClient

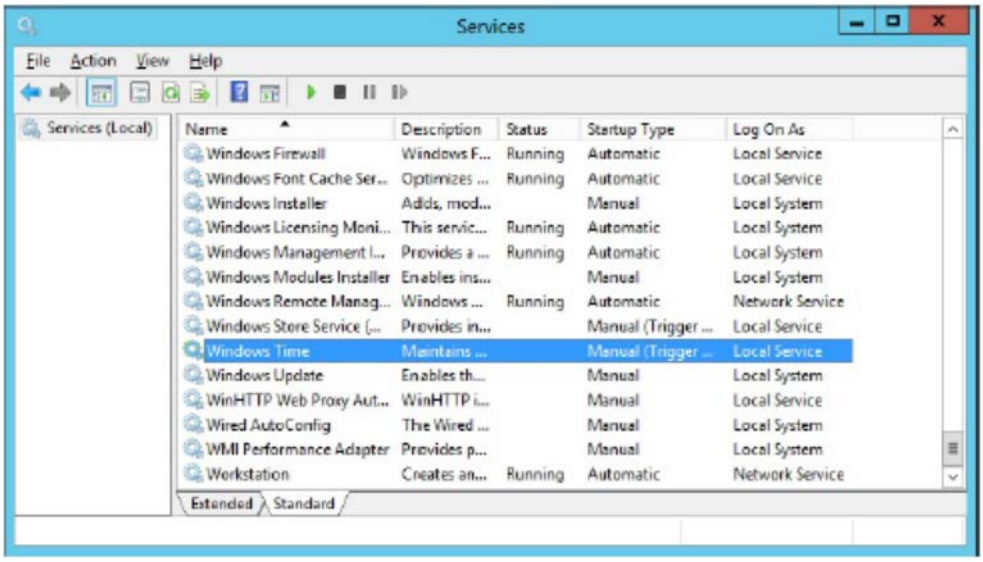
"SpecialPollInterval" Type: REG_DWORD, Data: 900 (decimal)

FIGURE E.6 [Registry Editor] window



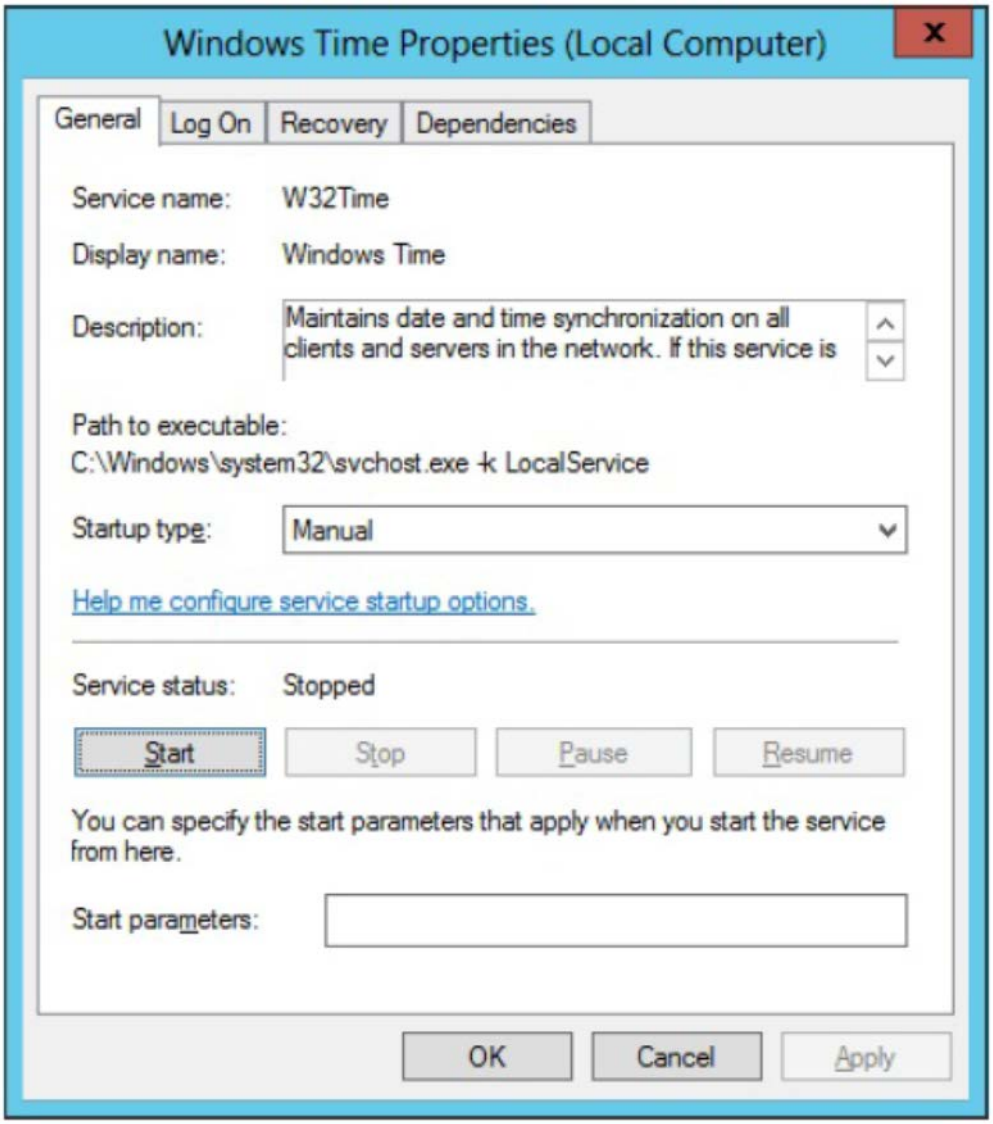
3. Close the Registry Editor.
4. Open [Start] - [Administrative Tools] - [Services].

FIGURE F.6 [Services] window



5. Right-click the Windows Time service. Select [Properties] from the context menu.
6. Set "Automatic (Delayed Start)" in [Startup type] in the [Windows Time Properties] dialog box.

FIGURE E.7 [Windows Time Properties] window

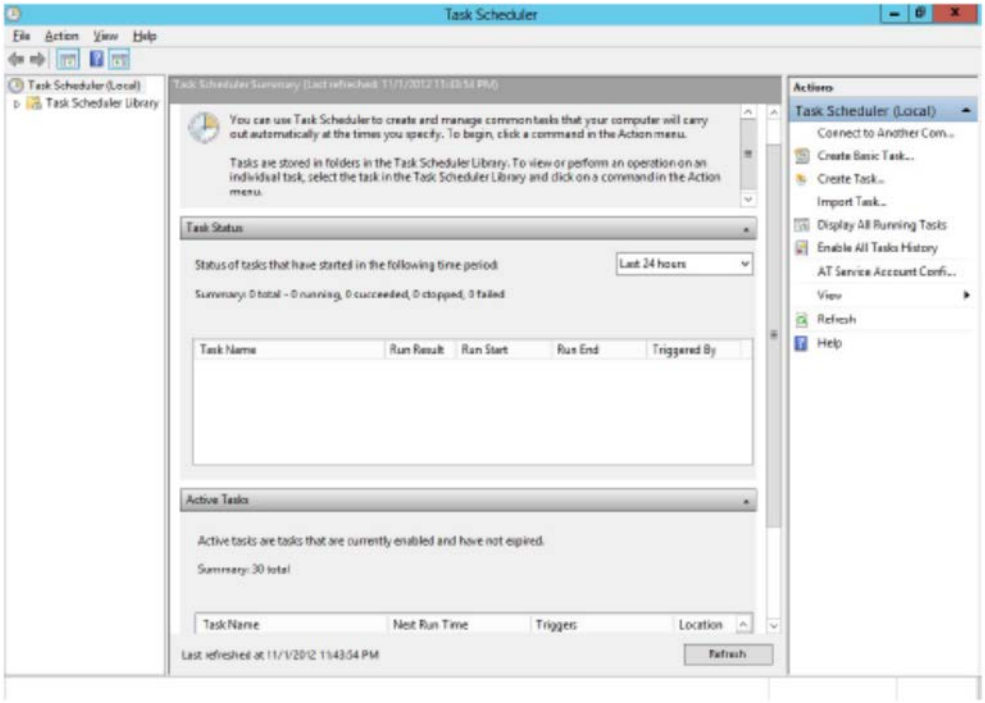


7. If the W32Time service is stopped, click the [Start] button.
8. If the W32Time service is running, click the [Stop] button to pause in the service, and then click the [Start] button.

E.2.3 Event Task Settings

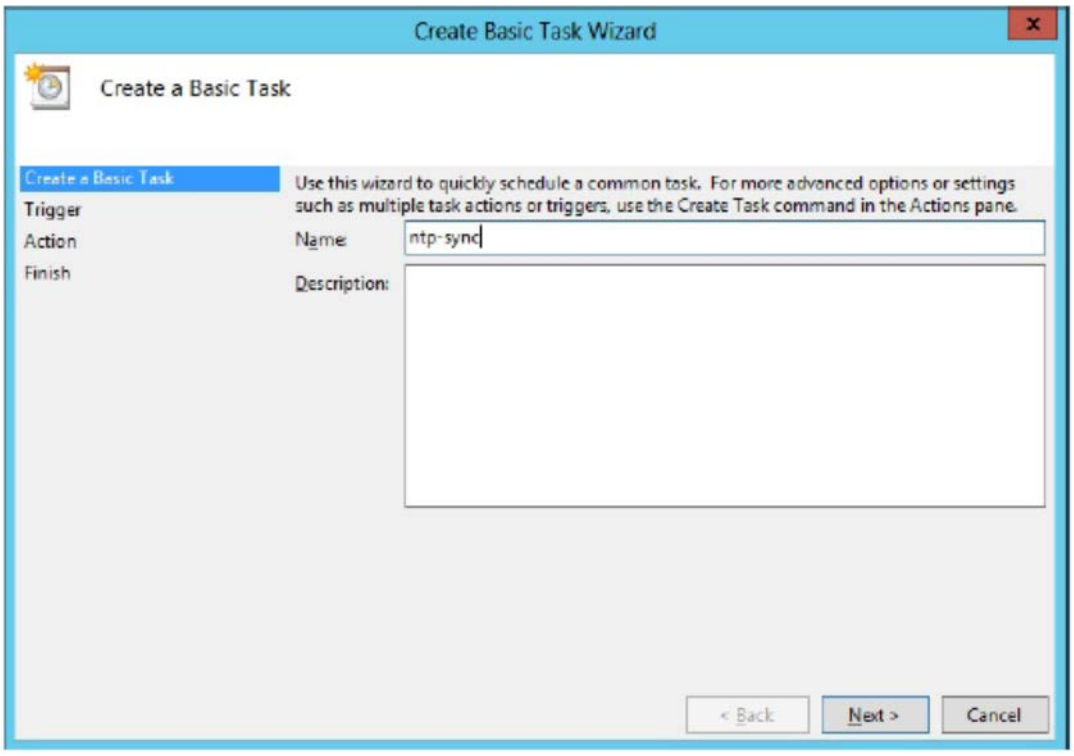
1. Open [Start] - [Administrative Tools] - [Task Scheduler].

FIGURE E.8 [Task Scheduler] window


Task Scheduler
File Action View Help
Task Scheduler (Local)
Task Scheduler Library
You can use Task Scheduler to create and manage common tasks that your computer will carry out automatically at the times you specify. To begin, click a command in the Action menu.
Tasks are stored in folders in the Task Scheduler Library. To view or perform an operation on an individual task, select the task in the Task Scheduler Library and click on a command in the Action menu.
Task Status
Status of tasks that have started in the following time period:
Last 24 hours
Task Name
Run Result
Run Start
Run End
Triggered By
Active Tasks
Active tasks are tasks that are currently enabled and have not expired.
Summary: 30 total
Task Name
Next Run Time
Triggers
Location
Refresh
Actions
Task Scheduler (Local)
Connect to Another Com...
Create Basic Task...
Create Task...
Import Task...
Display All Running Tasks
Enable All Tasks History
AT Service Account Confi...
View
Refresh
Help

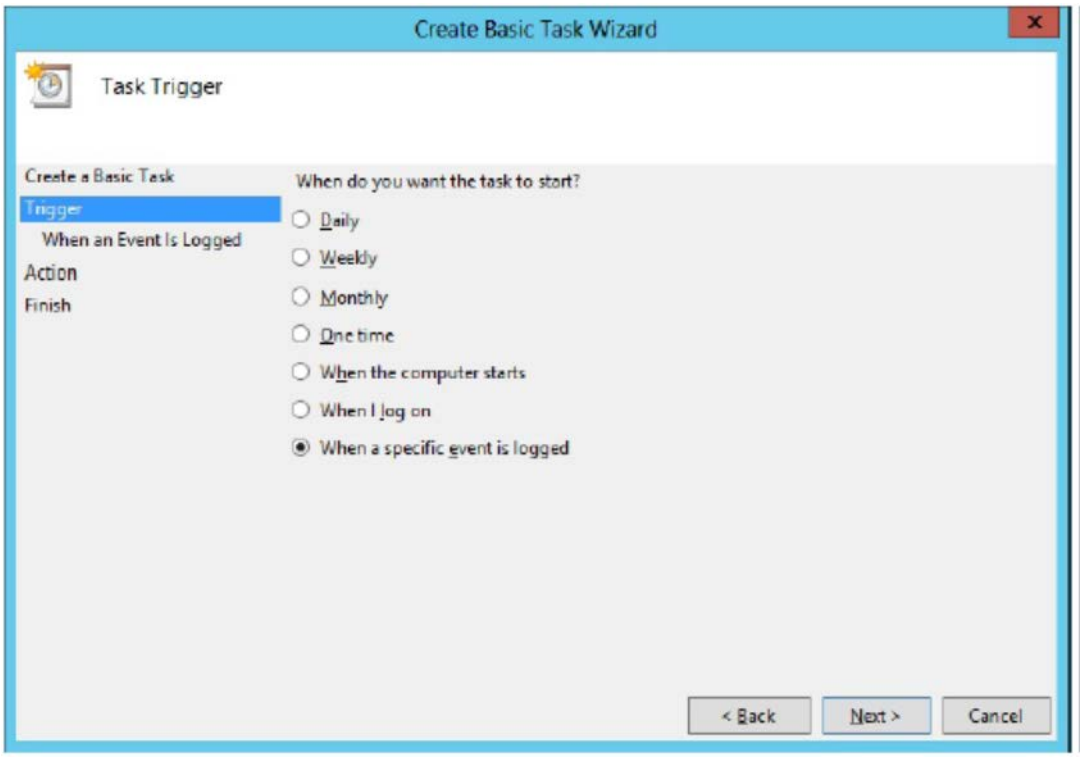
2. Select [Create Basic Task] at the right of the window. [Create Basic Task Wizard] appears.
3. Enter a chosen task name in [Name] on the [Create a Basic Task] screen, and click the [Next] button.
   Example: On the screen below, "ntp-sync" is an arbitrary task name.

FIGURE E.9 [Create Basic Task Wizard] window (Create a Basic Task)


Create Basic Task Wizard
Create a Basic Task
Create a Basic Task
Trigger
Action
Finish
Use this wizard to quickly schedule a common task. For more advanced options or settings such as multiple task actions or triggers, use the Create Task command in the Actions pane.
Name:
ntp-sync
Description:
< Back
Next >
Cancel

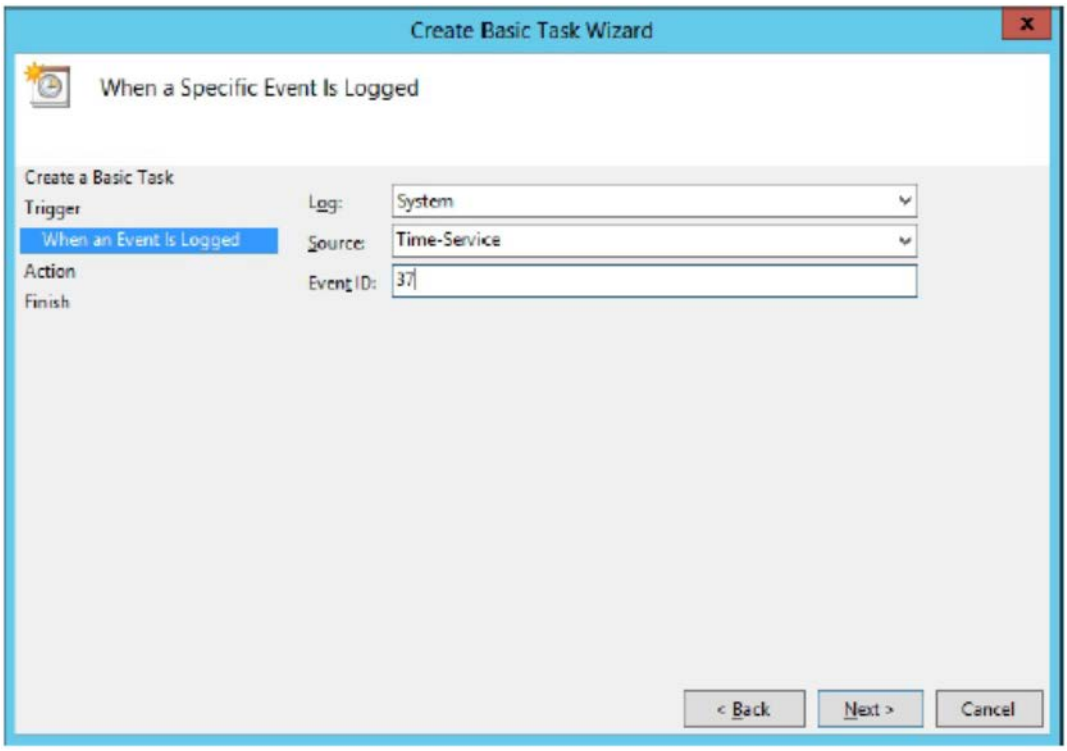
4. Select "When a specific event is logged" on the [Task Trigger] screen. Click the [Next] button.

FIGURE E.10 [Create Basic Task Wizard] window (Task Trigger)



5. [When a Specific Event Is Logged] screen appears. Set the following parameters.
   - Log]: System
   - [Source]: Time-Service
   - [Event ID]: 37

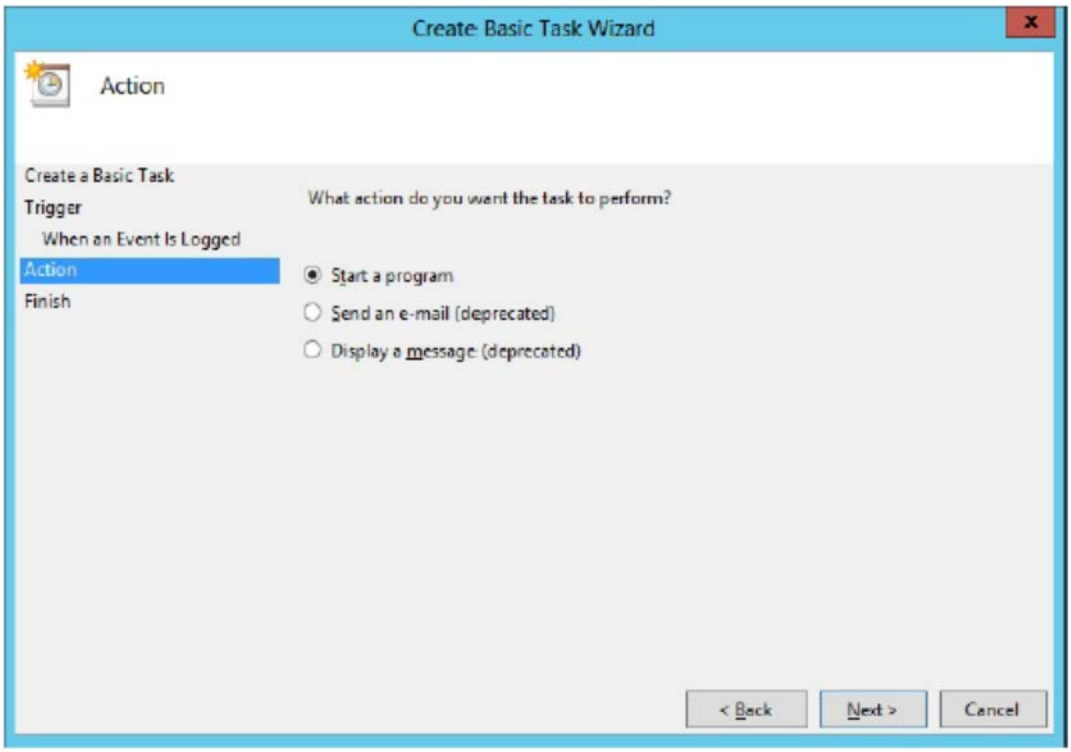
FIGURE E.11 [Create Basic Task Wizard] window (When a Specific Event Is Logged)



Click the [Next] button.

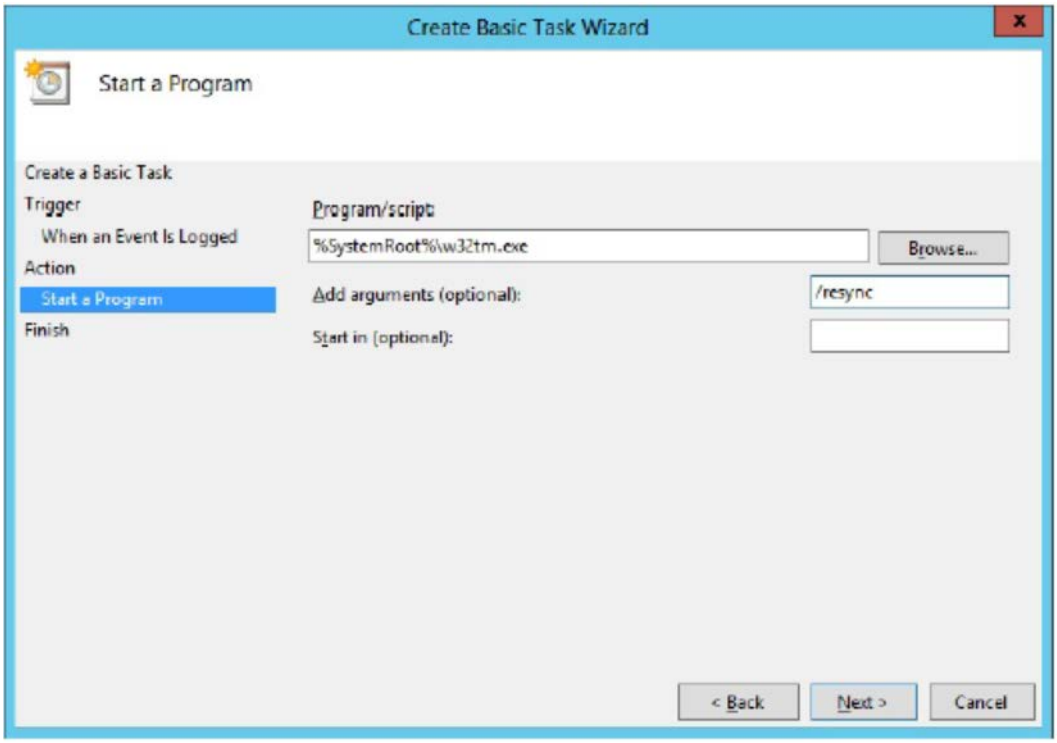
6. Select "Start a program" on the [Action] screen. Click the [Next] button.

FIGURE E.12 [Create Basic Task Wizard] window (Action)



7. Set the following parameters on the [Start a Program] screen.
   - [Program/script]: %SystemRoot%¥w32tm.exe
   - [Add arguments] (optional): /resync

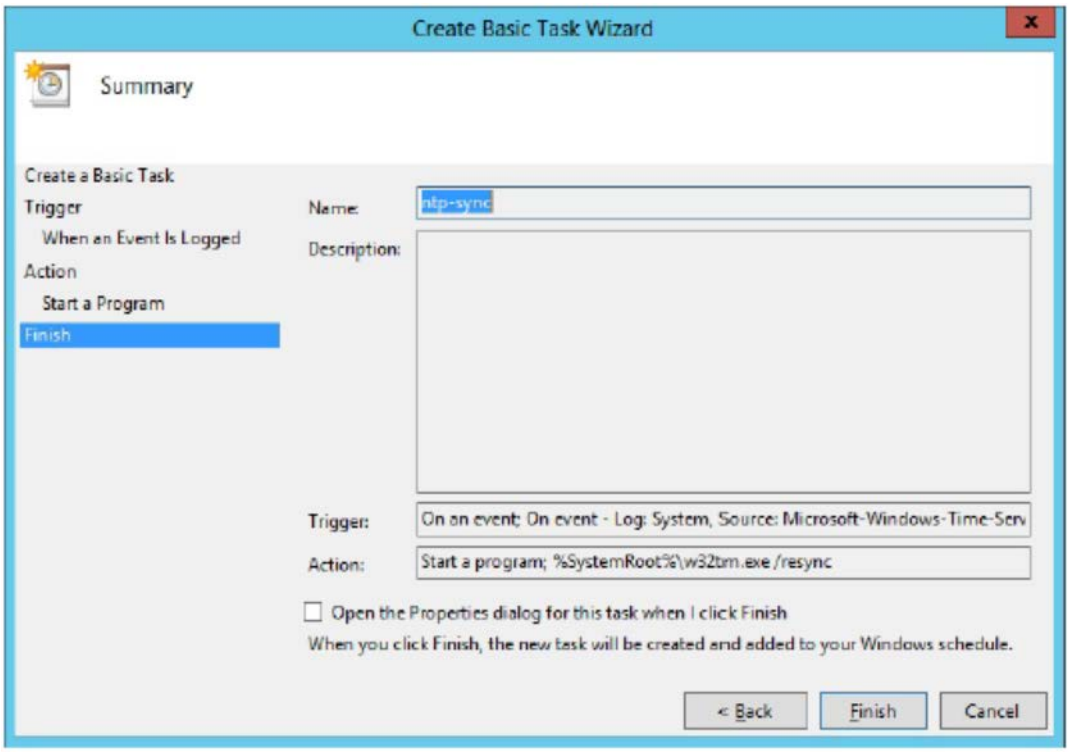
FIGURE E.13 [Create Basic Task Wizard] window (Start a Program)



Click the [Next] button.

8. Check the [Open the Properties dialog for this task when I click Finish] check box on the [Summary] screen.

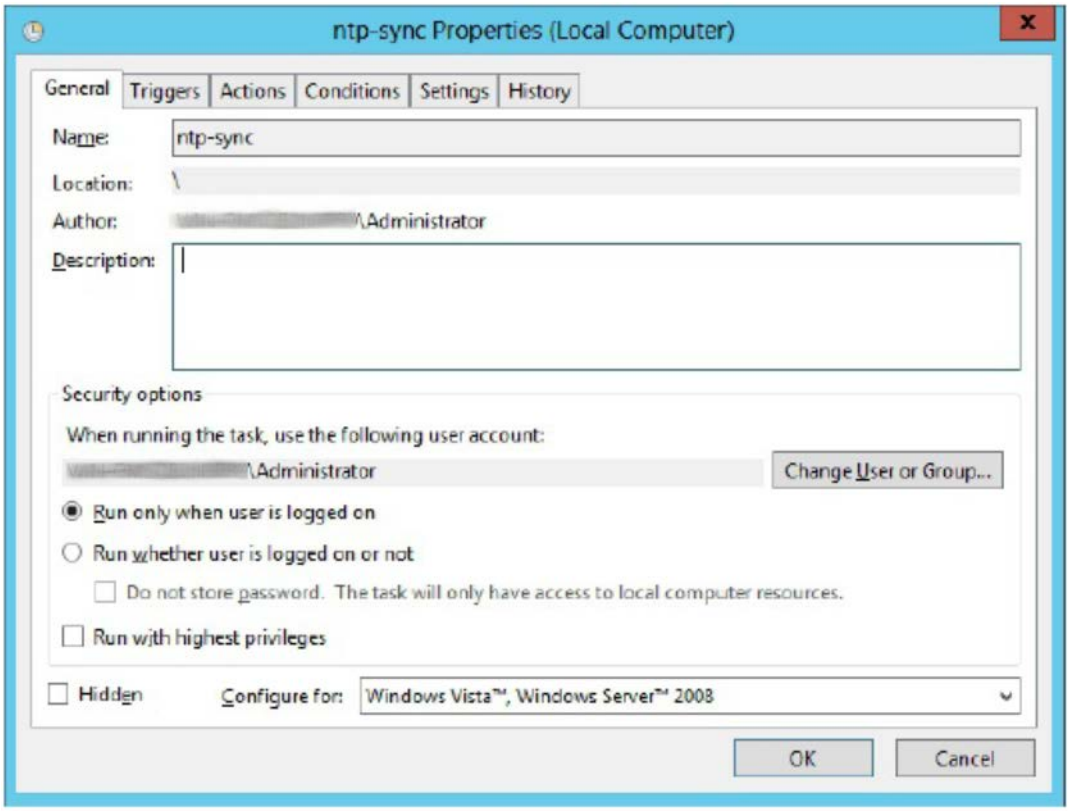
FIGURE E.14 [Create Basic Task Wizard] window (Summary)



Click the [Finish] button.

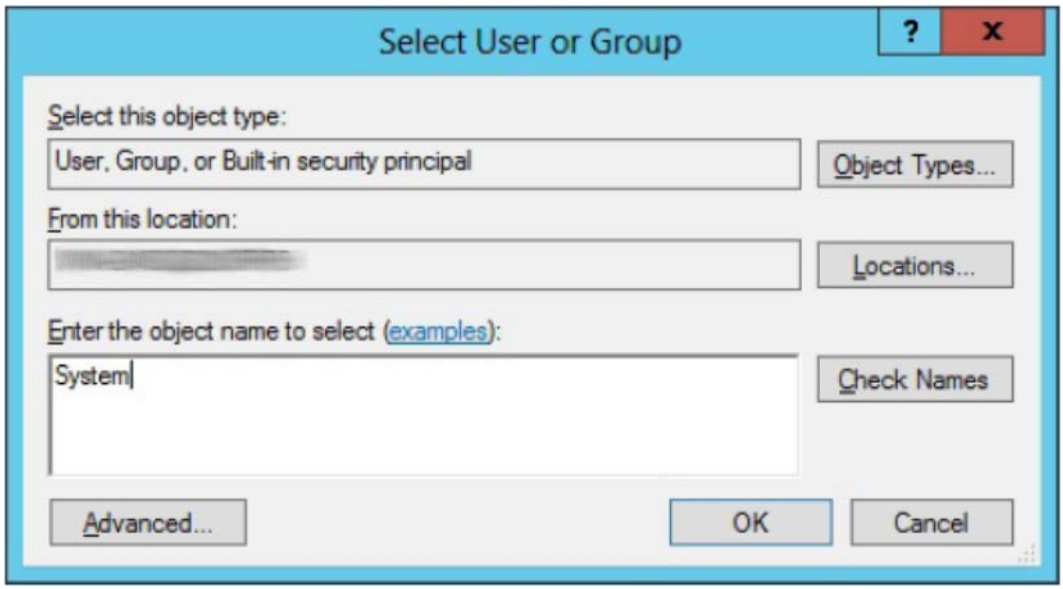
9. Click the [Change User or Group] button in the [Properties] dialog box.

FIGURE E.15 [Properties] dialog box



10. [Select User or Group] dialog box appears.
    Set the following parameter.
    - [Enter the object name to select]: System

FIGURE E.16 [Select User or Group] window



Click the [OK] button.

11. Click the [Change User or Group] button in the [Properties] dialog box.

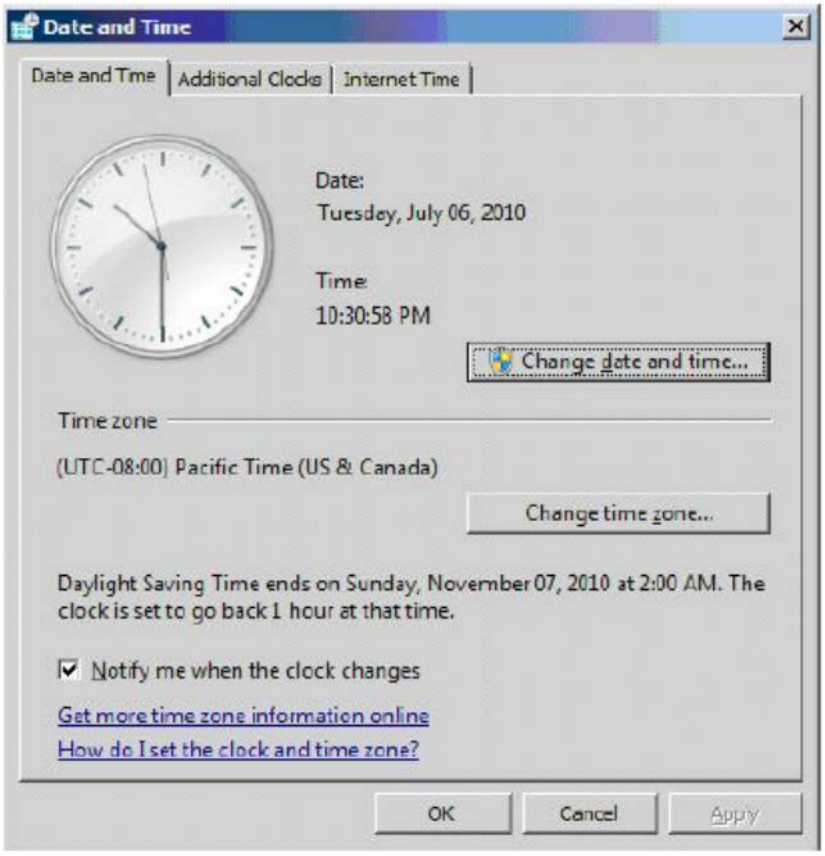
E.3 NTP Settings in Windows Server 2008 R2

The procedures in this chapter require Administrator privileges.
All screenshots are display examples, and the actually displayed contents vary depending on the system configuration and other factors.

E.3.1 Specifying an NTP Server

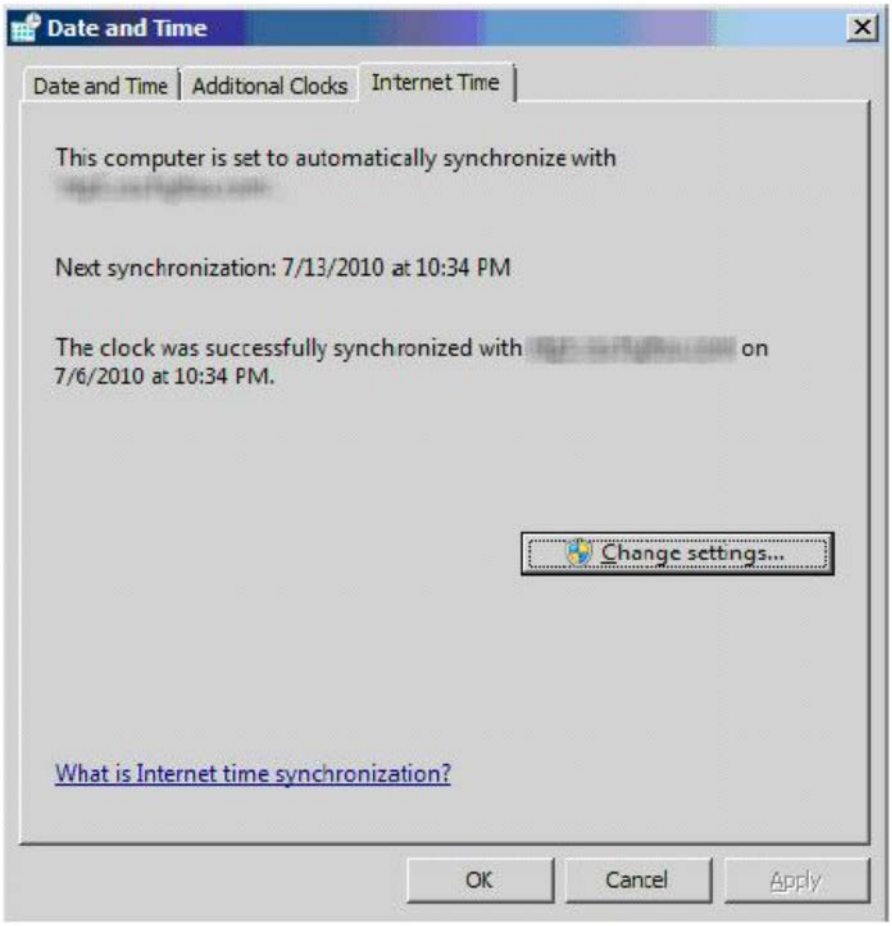
1. Select [Control Panel] - [Set the time and date]. The [Date and Time] dialog box appears.

FIGURE E.17 [Date and Time] window (1)


Date and Time
Date and Time
Additional Clocks
Internet Time
Date:
Tuesday, July 06, 2010
Time:
10:30:58 PM
Change date and time...
Time zone
(UTC-08:00) Pacific Time (US & Canada)
Change time zone...
Daylight Saving Time ends on Sunday, November 07, 2010 at 2:00 AM. The clock is set to go back 1 hour at that time.
Notify me when the clock changes
Get more time zone information online
How do I set the clock and time zone?
OK
Cancel
Apply

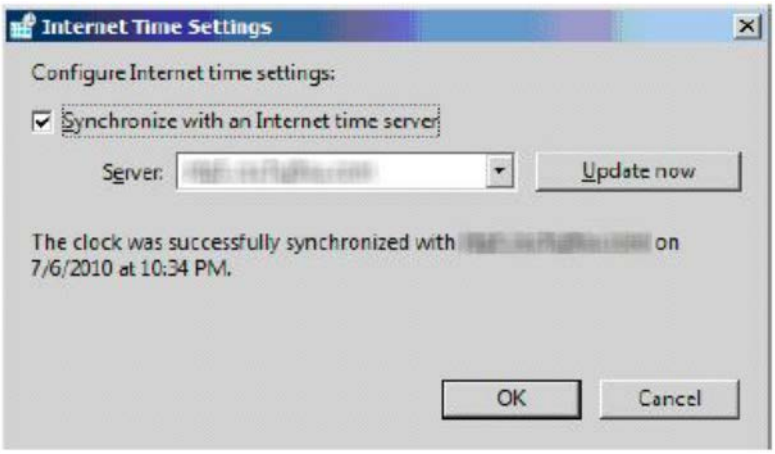
2. Click the [Change settings] button on the [Internet Time] tab

FIGURE E.18 [Date and Time] window (2)



3. Set the following parameters in the [Internet Time Settings] dialog box.
   - [Synchronize with an Internet time server]: Check the check box.
   - [Server]: Enter an NTP server name.

FIGURE E.19 [Internet Time Settings] window



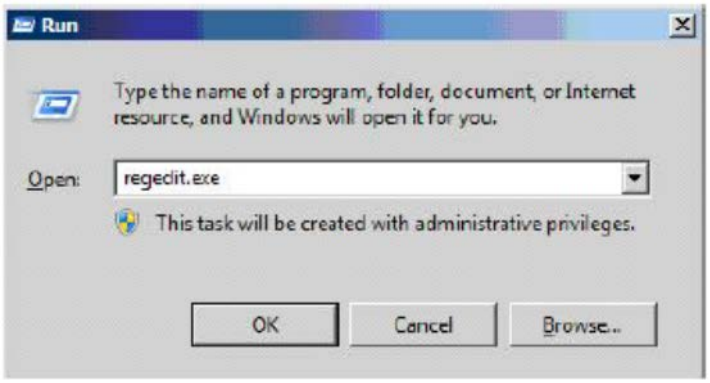
4. Click the [OK] button to close the [Internet Time Settings] dialog box.

5. Click the [OK] button to close the [Date and Time] dialog box.

E.3.2 Synchronization Interval and Startup Settings of NTP Service

1. Select [Start] - [Run]. Enter "regedit.exe" in the dialog box, and click the [OK] button.
   The Registry Editor appears.

FIGURE E.20 [Run] window

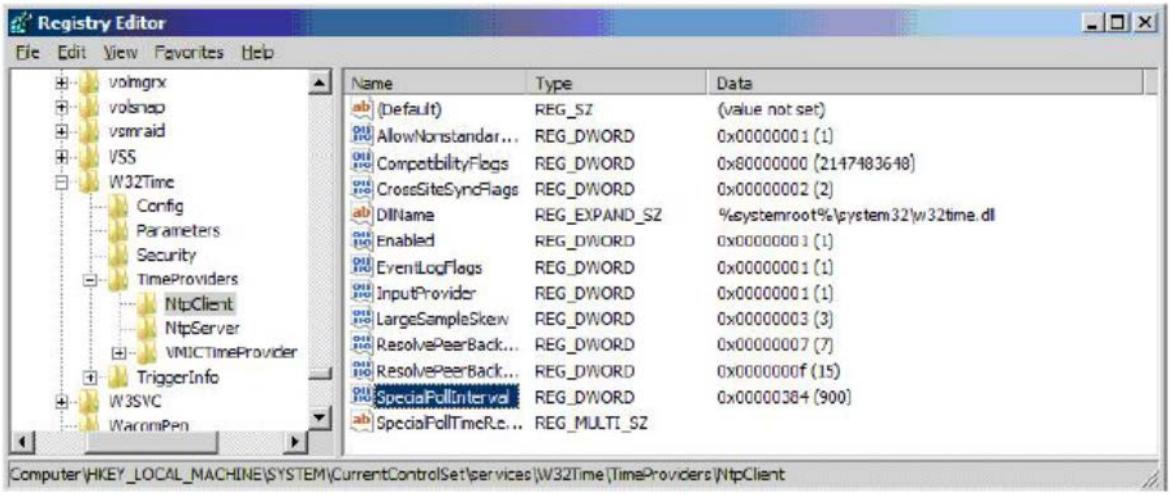

Run
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:
regedit.exe
This task will be created with administrative privileges.
OK
Cancel
Browse...

2. Open the following key, and set 900 for the SpecialPollInterval value.

HKEY_LOCAL_MACHINE¥SYSTEM¥CurrentControlSet¥Services¥W32Time ¥TimeProviders¥NtpClient

"SpetcialPollInterval" Type: REG_DWORD, Data: 900 (decimal)

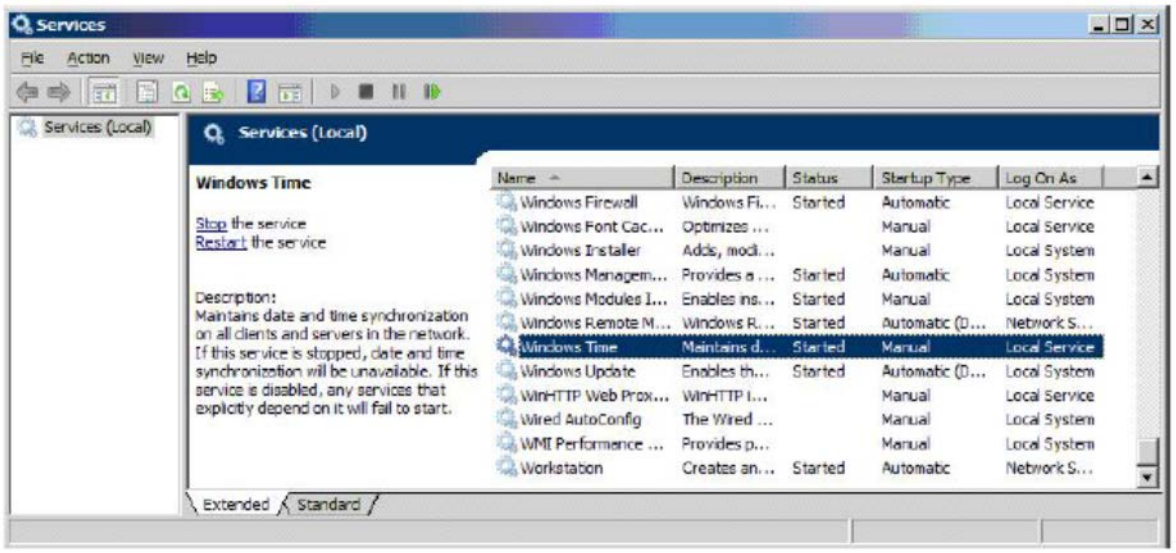
FIGURE E.21 [Registry Editor] window



3. Close the Registry Editor.

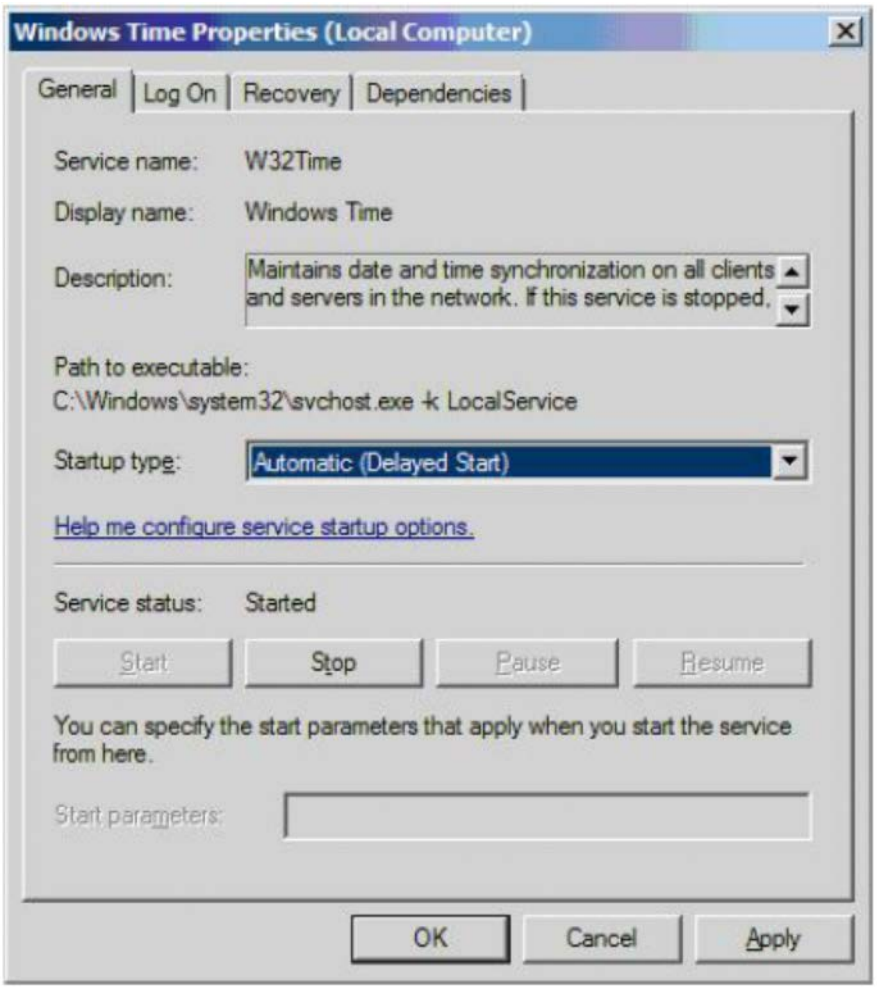
4. Open [Start] - [Administrative Tools] - [Services].

FIGURE E.22 [Services] window


Services
File Action View Help
Services (Local)
Services (Local)
Windows Time
Stop the service
Restart the service
Description:
Maintains date and time synchronization on all clients and servers in the network. If this service is stopped, date and time synchronization will be unavailable. If this service is disabled, any services that explicitly depend on it will fail to start.
Name
Description
Status
Startup Type
Log On As
Windows Firewall Windows Fi... Started Automatic Local Service
Windows Font Cac... Optimizes ... Manual Local Service
Windows Installer Adds, modi... Manual Local System
Windows Managem... Provides a ... Started Automatic Local System
Windows Modules I... Enables ins... Started Manual Local System
Windows Remote M... Windows R... Started Automatic (D... Network S...
Windows Time Maintains d... Started Manual Local Service
Windows Update Enables th... Started Automatic (D... Local System
WinHTTP Web Prox... WinHTTP i... Manual Local Service
Wired AutoConfig The Wired ... Manual Local System
WMI Performance ... Provides p... Manual Local System
Workstation Creates an... Started Automatic Network S...
Extended
Standard

5. Right-click the Windows Time service. Select [Properties] from the context menu.
6. Set "Automatic (Delayed Start)" in [Startup Type] in the [Windows Time Properties] dialog box.

FIGURE E.23 [Windows Time Properties] window

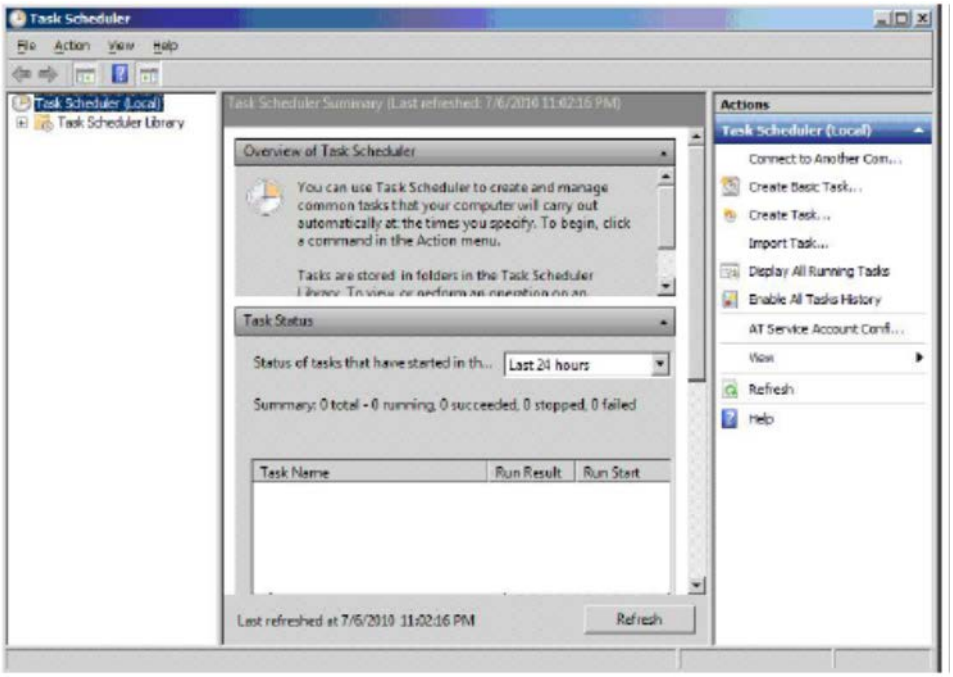


7. If the W32Time service is stopped, click the [Start] button.
   If the W32Time service is running, click the [Stop] button to pause in the service, and then click the [Start] button.
8. Click the [OK] button to close the [Windows Time Properties] dialog box.

E.3.3 Event Task Settings

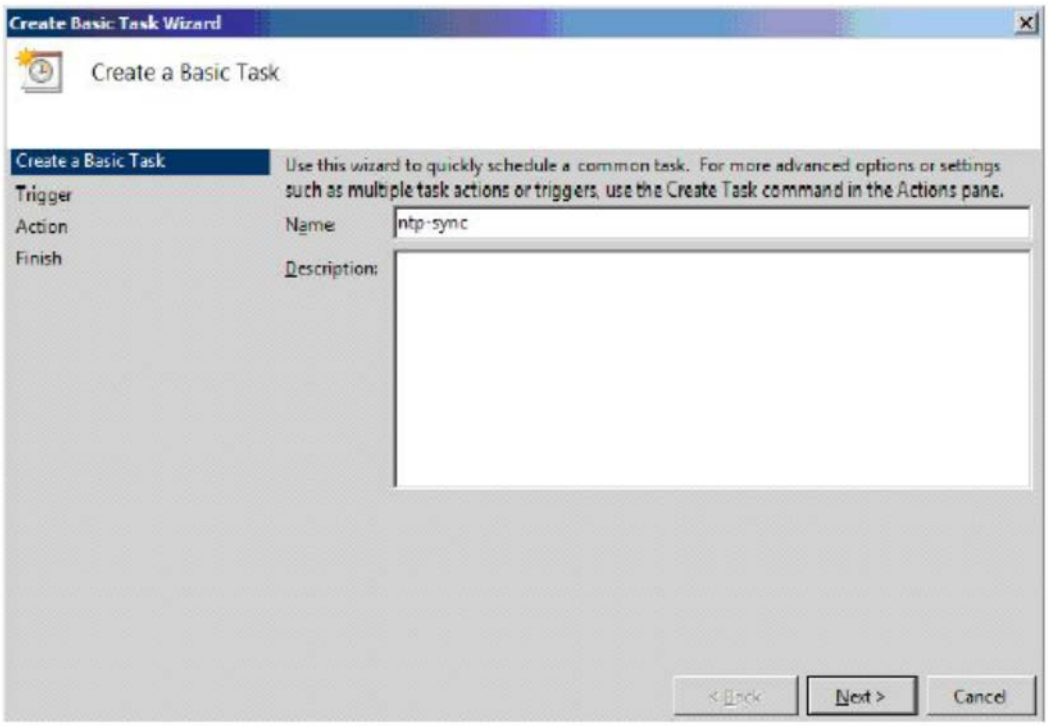
1. Open [Start] - [Administrative Tools] - [Task Scheduler].

FIGURE E.24 [Task Scheduler] window


Task Scheduler
File Action View Help
Task Scheduler (Local)
Task Scheduler Library
Task Scheduler Summary (Last refreshed: 7/6/2010 11:02:16 PM)
Overview of Task Scheduler
You can use Task Scheduler to create and manage common tasks that your computer will carry out automatically at the times you specify. To begin, click a command in the Action menu.
Tasks are stored in folders in the Task Scheduler
Task Status
Status of tasks that have started in th...
Last 24 hours
Summary: 0 total - 0 running, 0 succeeded, 0 stopped, 0 failed
Task Name
Run Result
Run Start
Last refreshed at 7/6/2010 11:02:16 PM
Refresh
Actions
Task Scheduler (Local)
Connect to Another Com...
Create Basic Task...
Create Task...
Import Task...
Display All Running Tasks
Enable All Tasks History
AT Service Account Confi...
View
Refresh
Help

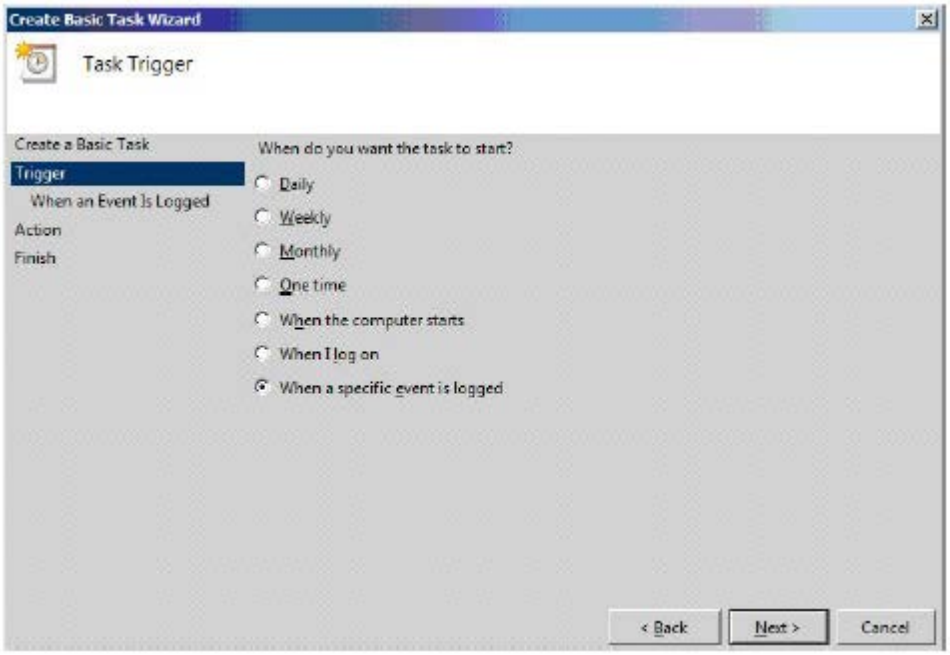
2. Select [Create Basic Task] at the right of the window. [Create Basic Task Wizard] appears.
3. Enter a chosen task name in [Name] on the [Create a Basic Task] screen, and click the [Next] button.
   Example: On the screen below, "ntp-sync" is an arbitrary task name.

FIGURE E.25 [Create Basic Task Wizard] window (Create a Basic Task)


Create Basic Task Wizard
Create a Basic Task
Create a Basic Task
Trigger
Action
Finish
Use this wizard to quickly schedule a common task. For more advanced options or settings such as multiple task actions or triggers, use the Create Task command in the Actions pane.
Name:
ntp-sync
Description:
< Back
Next >
Cancel

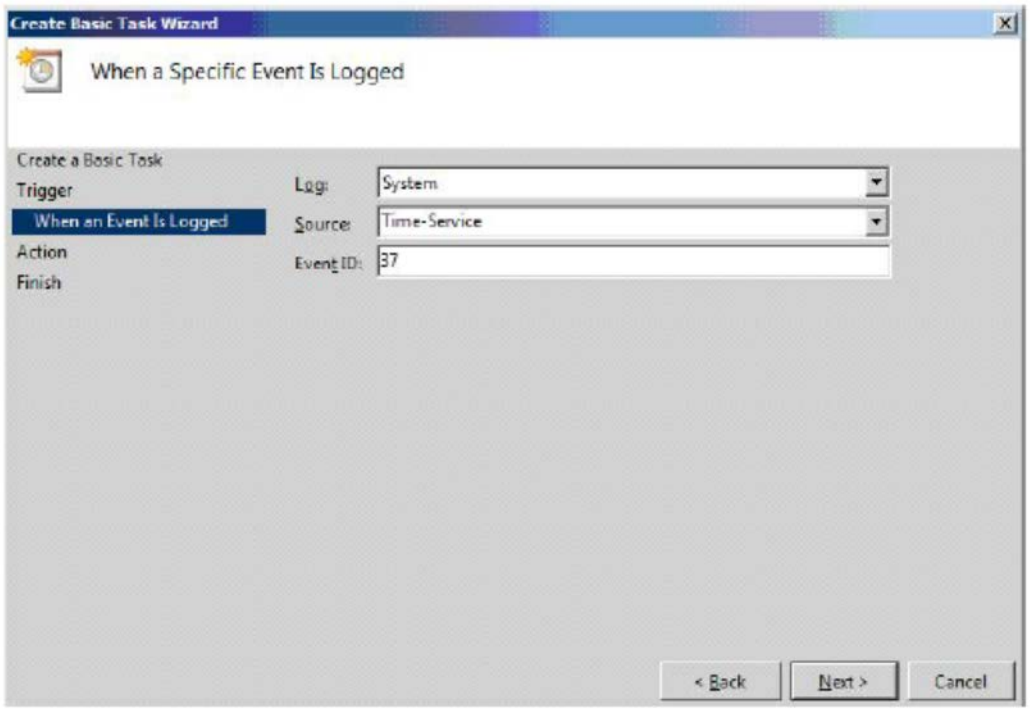
4. Select "When a specific event is logged" on the [Task Trigger] screen. Click the [Next] button.

FIGURE E.26 [Create Basic Task Wizard] window (Task Trigger)



5. [When a Specific Event Is Logged] screen appears. Set the following parameters.
   - [Log]: System
   - [Source]: Time-Service
   - [Event ID]: 37

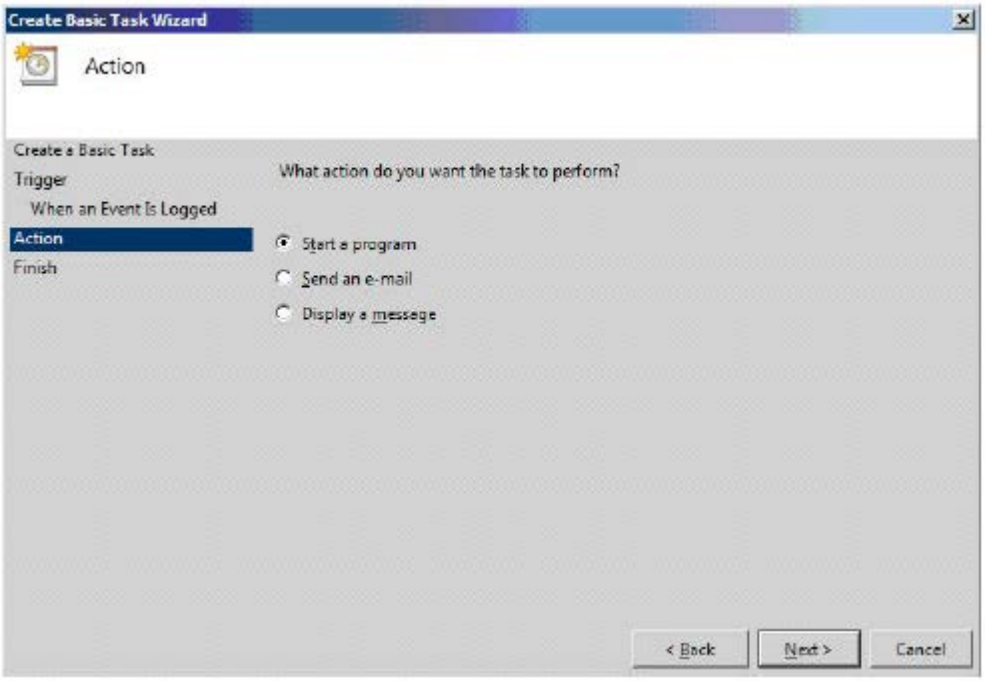
FIGURE E.27 [Create Basic Task Wizard] window (When a Specific Event Is Logged)



Click the [Next] button.

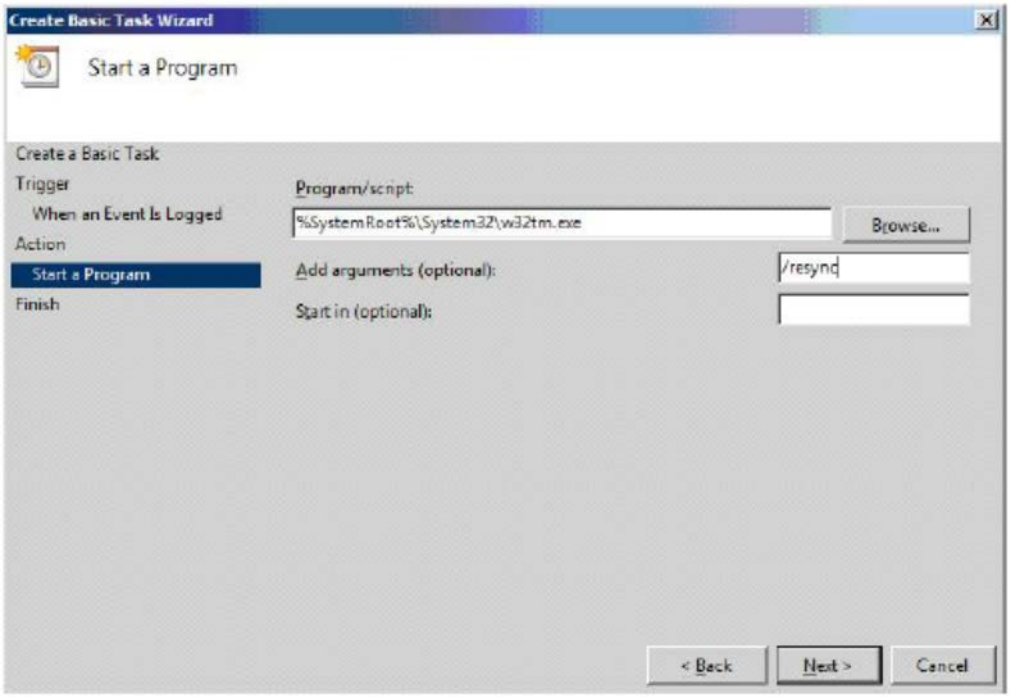
6. Select "Start a program" on the [Action] screen. Click the [Next] button.

FIGURE E.28 [Create Basic Task Wizard] window (Action)



7. Set the following parameters on the [Start a Program] screen.
   - [Program/script]: %SystemRoot%¥System32¥w32tm.exe
   - [Add arguments] (optional): /resync

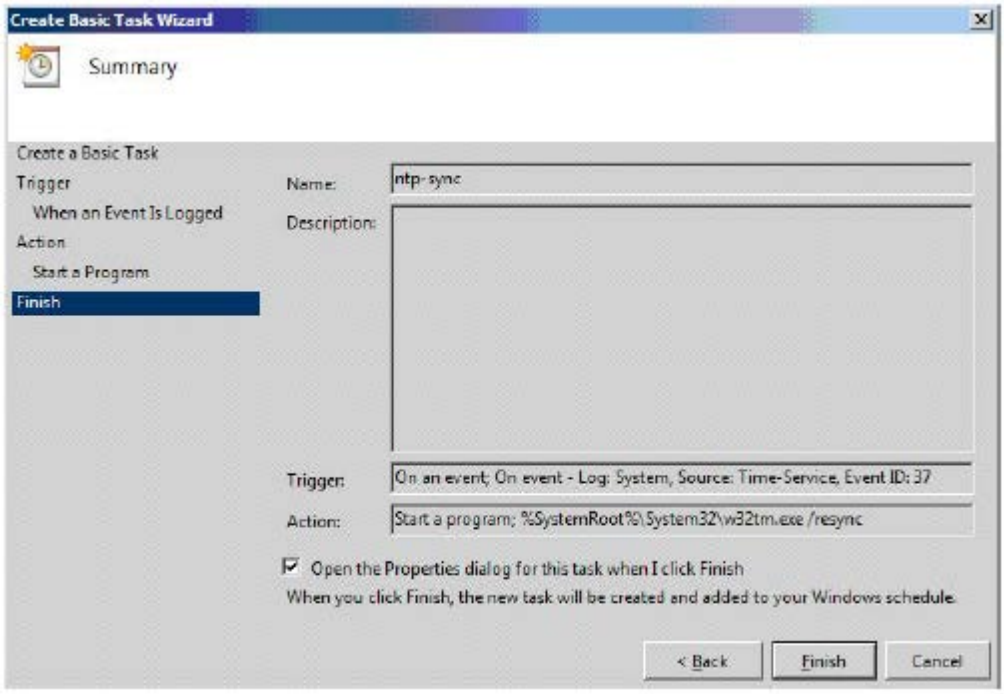
FIGURE E.29 [Create Basic Task Wizard] window (Start a Program)



Click the [Next] button.

8. Check the [Open the Properties dialog for this task when I click Finish] check box on the [Summary] screen.

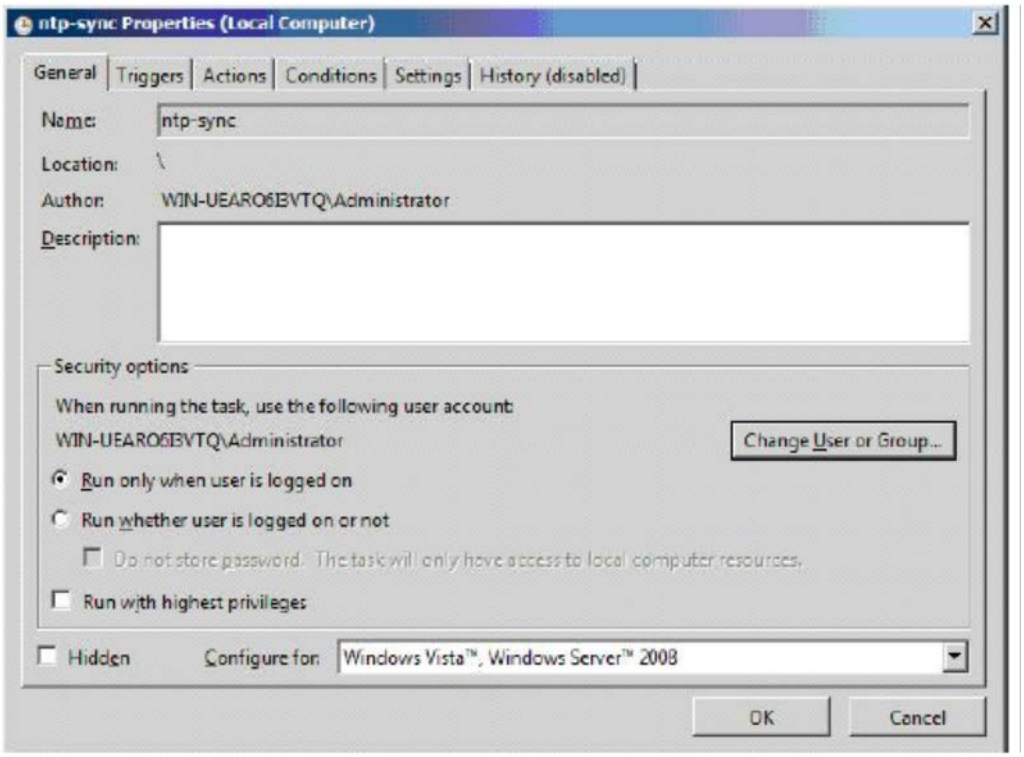
FIGURE E.30 [Create Basic Task Wizard] window (Summary)



Click the [Finish] button.

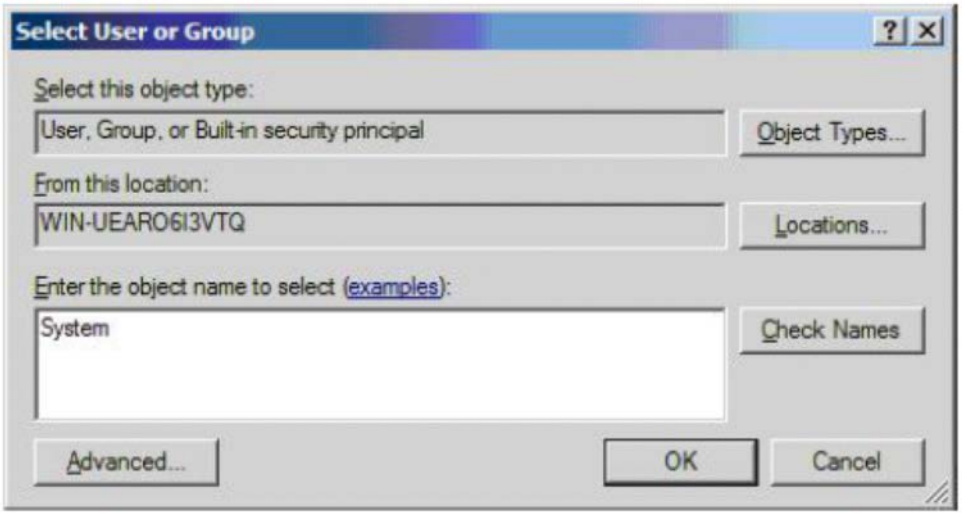
9. Click the [Change User or Group] button in the [Properties] dialog box.

FIGURE E.31 [Properties] dialog box



10. [Select User or Group] dialog box appears.
    Set the following parameter.
    - [Enter the object name to select]: System

FIGURE E.32 [Select User or Group] window



Click the [OK] button.

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